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ADDRESSES.

ADDRESS TO THE MEMBERS OF THE REGULAR MEDICAL PROFESSION OF LOUISIANA.

BY JOSEPH JONES, M.D.,

PRESIDENT OF THE LOUISIANA STATE MEDICAL SOCIETY.

GENTLEMEN:—The tenth annual session of the Louisiana State Medical Society will be held in the town of Monroe on the third Wednesday in April, 1888, and subjects of paramount importance to the Medical Profession will be presented for consideration and discussion. We briefly formulate some of the questions now at issue, with the hope that they may receive the earnest consideration of the medical profession.

I.—THE ESTABLISHMENT OF A STATE MEDICAL LIBRARY,

for the preservation of the archives of the Society, the diffusion of medical knowledge, and the promotion of original scientific research in all the departments of medical science.

The object sought to be accomplished is the collection, classification and preservation of the manuscripts, documents and publications bearing upon the eventful history of the medical profession of the Mississippi Valley from the first settlement of Louisiana in 1699 to the present day.

Every fact, document or publication that relates to the history of epidemics, and to the origin, cause and prevention of endemic and epidemic diseases in Louisiana and in the Mississippi Valley, should be carefully preserved in permanent form, and in a permanent building, and this building should also serve the purpose of a Central Hall, for the meetings of the State Medical Society at stated periods. It is believed that facts of great value, and rare documents and works, are scattered over this land, which if gathered together and sheltered within the ample folds of a permanent building, would prove of inestimable value.

It is the earnest hope of the patriot and friend of progress that each member of the Louisiana State Medical Society, and of the entire medical profession of the South and Southwest, will view with favor this important enterprise, and contribute documents, works, original researches, and practical observations for permanent preservation in the medical archives.

We cannot build and maintain a library without money. Without the generous response of the medical profession this useful and benevolent project will remain unaccomplished.

Dr. J. S. Johnston, of Alexandria, by his generous gift, during the meeting of the Louisiana State Medical Society on the 12th of April, 1887, of a square of ground for the building of the library, has set a noble example to the medical profession.

II.—MEDICAL EDUCATION.

When we consider the importance and elevated character of the science of medicine—its object, the preservation of the health and lives, and the healing of the diseases, and the amelioration of the physical and mental sufferings of our fellow human beings—its extent embracing a knowledge of all science—it is evident that medical education should engage the earnest attention of the entire medical profession. The advances made in all the branches of knowledge, and especially in the science of medicine, during the past century, have exceeded in extent and value those of all past ages; and it is no longer possible to compress its vast domain within the narrow limits of *seven Professorships*, or to compress its circle within the brief span of less than thirty months.

The present age owes its wonderful progress to *experimental scientific research.*

The value and perfection of modern educational systems are due, to a large extent, to practical demonstrations in the great field of physics, chemistry, physiology, pathology, therapeutics, and clinical medicine.

Universities of learning and science must be regarded as composed of two distinct bodies. On the one hand must be ranged the organizing powers and executive officers—the *Trustees* and *Professors;* and on the other, the greater and more useful body, the grand army of the *Alumni.* The voice of the latter should not be silent, but should speak in thunder tones, demanding a firm, wise and steady enlargement and practical advance of the colleges and universities all along the lines of literature, art, and science.

III.—PUBLIC AND INTERNATIONAL HYGIENE.

The medical profession of Louisiana should be foremost in the great work of perfecting and unifying the health and quarantine laws of the individual States and Territories of this great Republic. The confusion, alarm and terror of the inhabitants of entire communities and States, following local outbreaks of yellow fever on the Atlantic and Gulf

Coasts, and the threatened importation of cholera from Europe, reveal an imperfection of sanitary laws and knowledge, and of defencelessness against invasions of foreign pestilence. This condition of the disorganized sanitary forces of the United States, can only be fitly compared with her dismantled fortresses and rotten navy.

It is high time that the medical profession and the civil authorities of the individual States and Territories should be aroused to the necessity and importance of united action for the discussion, perfection and inauguration of comprehensive measures for the exclusion of foreign, and the eradication of domestic, pestilence. This unification and perfection of the sanitary and quarantine laws of this Nation can be effected, not by the combined wisdom and action of the legal representatives of the sovereign States, acting in concert and assembled in general convention. Let the accomplished, learned and patriotic physicians of Louisiana take the lead in this work, which has for its aim the preservation of the lives of the people, and the advancement of the material, social and moral welfare of our country.

IV.—PUBLIC SCHOOLS; THEIR HYGIENE; AND THE INTRODUCTION OF THE STUDY OF CHEMISTRY.

The first duty of the managers and officials of the public schools of Louisiana, should be to perfect their hygienic arrangements, which in many localities are proven to be defective and detrimental to the health of the teachers and pupils. The science of chemistry has contributed more to the physical and industrial progress and wealth of the human race than all other branches of human knowledge. Chemistry is the basis of hygiene and physiology, and it has furnished facts of inestimable value to the agriculturist, to the mining engineer, and to the manufacturing chemist.

The introduction of the study of inorganic and organic chemistry into the public schools of Louisiana, will not only aid in the intellectual training of the children, but will aid materially in the agricultural and mineral progress and development of the State.

V.—The Hygiene, Diseases and Treatment of Prisoners in the penitentiary, prisons and jails of Louisiana.

VI.—The establishment af a School for the Education and Training of Nurses; and the consideration of the means by which the nurses employed in the Charity Hospitals of New Orleans and of other cities may receive regular and just compensation for their services.

VII.—The revision, amendment, perfection, and re-enactment of the acts of the General Assembly of Louisiana relative to the Practice of Medicine in Louisiana.

In this connection, the protection of the public against unqualified and unprincipled practitioners of medicine and pharmacy, and against the irresponsible and indiscreet sale of alcoholic liquors, drugs and poisons by druggists, should receive careful consideration, with a view of influencing legislative action.

VIII.—ORGANIZATION.

Of the 992 registered physicians in the State of Louisiana, up to January 1, 1887, 773 are classed as regular; and of this number only 176 are members of Louisiana State Medical Association. Of the fifty-nine Parishes of Louisiana thirty-four, or a little over one-half, have representatives in the State Medical Society.

These figures furnish an argument for renewed activity on the part of the members of the parent organization, to secure the organization of Parish Medical Societies. The members of the medical profession throughout the State are most earnestly and respectfully urged to organize societies and send delegates to the meeting in Monroe.

IX.—ORIGINAL CONTRIBUTIONS TO MEDICAL SCIENCE.

The value of the transactions of medical societies depends primarily and almost exclusively upon the contributions of their members to the various branches of medical science. It is earnestly hoped that the Transactions of 1888 will be enriched by the carefully recorded experience of the physicians of Louisiana, relating to general medicine, general surgery, obstetrics, gynecology, therapeutics, materia medica, anatomy, physiology, pathology, diseases of children, ophthalmology, dermatology, hygiene, climatology, diseases of the nervous system, dental and oral surgery.

No State offers a richer or wider field for the careful and comprehensive study of disease; its chief city, situated at the mouth of the most important river in the world, offers, in its Charity Hospital, a vast field for clinical study in all the branches of medicine and surgery; its Delta has furnished, and still furnishes, the most important area for the study of the relations of climate and soil to the development and propagation of all the various forms of malarial disease. Here yellow fever has committed its greatest ravages; and here it has received the careful study of learned and humane physicians. Every fact relating to the history, origin, propagation and treatment of yellow fever and Asiatic cholera, typhus and typhoid fevers, malarial hæmorrhage, Oriental leprosy, hydrophobia, scarlet fever, diphtheria, and other endemic infectious and epidemic diseases, in the different parishes, cities, towns and villages of this State, should be recorded by the practicing physicians, and presented in the form of cases, essays, and monographs, for publication and permanent preservation in the archives of the State Society.

COMMITTEE ON ESSAYS.

The committee on essays as now constituted consists of the following members: Dr. I. J. Newton, Bastrop, Chairman; Drs. R. H. Day, Baton Rouge; J. W. Dupree, Baton Rouge; H. D. Bruns, New Orleans; C. D. Owens, Alexandria; W. D. White, Abbeville; Smith Gordon, Alexandria; W. L. Dickson, New Orleans; R. W. Seay, Pilcher's Point; Thomas Hebert, New Iberia.

The physicians of Louisiana are respectfully requested to forward the titles of their essays, monographs, papers, and cases, at the earliest practicable

moment, to the accomplished and energetic chairman, or to any one of the eminent medical men composing the committee on essays.

In the past much good has been accomplished by the labors of the chairman of this committee, and its members have demonstrated their devotion to the best interests of our profession by their valuable contributions to its literature.

156 Washington Avenue, 4th District, New Orleans, La., November, 1887.

ORIGINAL ARTICLES.

THE CAUSE AND TREATMENT OF INFANTILE ECZEMA.

Read in the Section on Diseases of Women and Children, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887.

BY JOHN V. SHOEMAKER, A.M., M.D.,
OF PHILADELPHIA, PA.

Infantile eczema is one of the most common diseases of early life. It is always a distressing and frequently an obstinate affection, remaining for weeks or months; but as a rule, it is much more amenable to treatment than the eczema of adults. It may occur at a period during infancy, but it is most frequently observed during the first six months of infantile life, at the time of weaning, and during the process of dentition.

It may appear in a variety of forms. In some cases it is characterized by the development of a variable number of erythematous spots, or blotches upon the face, scalp, and other portions of the body. In others the eruption is purely papular; in still others it consists solely of vesicles situated upon a reddened inflamed base, or both lesions may be intermingled. The pustular variety is characterized by the formation of pustules of various sizes, either alone or commingled with vesicles, papules and vesico-papules. The disease may involve any or all portions of the integument, but it most frequently attacks the face, scalp, neck, chest, buttocks, and the upper and lower extremities. It pursues a variable course. The papular and erythematous forms usually disappear by resolution, but they may pass imperceptibly into the chronic squamous stage of the disease. The surface then presents a dull red infiltrated appearance, and is covered with a number of minute epidermic scales.

The vesicular and pustular varieties rarely terminate in resolution. As a rule, the vesicles and pustules burst within a few days after their development, exposing a raw weeping, bleeding surface, from which a sero-purulent fluid exudes, and dries into large firm yellowish crusts. When the scalp is the seat of the eruption, the hairs are matted together by the exudation, and the entire scalp becomes covered with yellowish masses, forming the condition known as crustalactea. As the disease progresses the irritation increases, so that the inclination to scratch the parts become almost irresistible, and patients tear the surface with their fingernails even while asleep. This, of course, increases the exudation and enlarges the diseased area. After an interval of several weeks the morbid action may cease, spontaneous repair take place, and the crusts drop off, disclosing a healthy but somewhat reddened surface. Usually, however, unless appropriate treatment be instituted the disease passes into the chronic stage, and remains for months or years with occasional periods of amelioration and exacerbation.

Infantile eczema is due practically to one of four causes: 1. Insufficient or improper food. 2. Imperfect assimilation. 3. Deficient excretion. 4. External irritation.

Insufficient or Improper Food.—This is one of the most frequent exciting causes of the disease. If the mother's milk is scanty in quantity, or poor in quality, or altered in character by pregnancy, passion, menstruation, anxiety or disease, the nutrition of the child will suffer, and eczematous or other eruptions speedily appear. If the child is handfed, and given unsuitable and indigestible articles of food, or, if the cow's milk upon which it is nourished is so diluted with water as to be deprived of its value the same result will follow.

Imperfect Assimilation.—This is another potent factor in the production of the disease. The food may be perfect in all respects, but if owing to disturbances of the digestive tract a considerable portion of it is either rejected by vomiting, or hurried out through the intestinal canal before digestion, and assimilation are complete, the blood will become thin, the nervous system will suffer, and various cutaneous eruptions appear.

Deficient Excretion.—Deficient excretion is not as frequently chargeable with the development of infantile eczema, as it is with many other cutaneous disorders, but many stubborn cases spontaneously disappear when the normal functions of the various excretory organs are reëstablished.

External Irritation.—This is frequently the unsuspected cause of numerous cases of infantile eczema. Among the common sources of irritation may be mentioned, woollen or flannel clothing, light clothing, dyed clothing, wet diapers, scratching, and the too frequent washing of the body and scalp with soap and water. The eruption is often aggravated by the use of quack preparations, or ointments recommended by obliging friends and neighbors.

Treatment.—The general principles upon which the successful treatment of infantile eczema must be based, are, to improve the nutrition of the patient, correct any disorder of digestion or excretion tha. may exist, and protect the affected surface from further irritation and endeavor to restore it to its normal condition. The measures to be employed in each case will vary with the cause of the disease, and the extent, variety and stage of the eruption. In some cases attention to diet and hygiene will be sufficient to effect a cure. In other cases local or constitutional medication will be required, while in obstinate cases both local and constitutional remedies must be employed. In mild cases of the erythematous or papular variety, in which the deficient character of the food supply is plainly appar-

ent, immediate improvement can often be obtained by simply giving a sufficient quantity of appropriate nourishment. There are several ways of accomplishing this. If the mother is nursing the child, and her milk is scanty or impoverished, she should be placed upon tonics and a liberal diet, and directed to give the child a definite quantity of cow's milk in addition to her own at stated intervals throughout the day. I have notes of several cases in which a rapid and decided improvement in the character and amount of the mother's milk, and a disappearance of the eruption from her child followed a liberal diet, conjoined with the use of the formulæ:

℞. Tinct. ignatiæ..... gtt. x.
Tinct. serpentariæ..... ʒ vj.
Tinct. cinchonæ..... ʒ j.
℥. Sig. Teaspoonful in water before meals and at bedtime.

If, unfortunately, the infant cannot be nursed by its mother, the best substitute for its natural food is pure undiluted cow's milk, unmixed with any other substance whatever. More than thirty years ago Dr. N. S. Davis declared before this Association, that the practice of diluting the cow's milk given to infants was the direct cause of incalculable suffering and innumerable deaths. Careful observation has convinced me of the truth of Dr. Davis' assertion. Time and again have I been called in to see infants of from ten weeks to six months old, who were crying continually, pining away, and in addition were covered with various forms of eczematous eruptions. On inquiring what the little patients were fed upon, answers were one part milk and three parts water, one part milk, one part flour, and five or six parts water. In one case the unfortunate child was being slowly and unknowingly starved to death upon one part milk and eight parts water. My orders in every case were to at once give each child plenty of pure undiluted cow's milk and nothing else for food. For some I directed 2 grains of pepsin to be given in addition with each feeding. No other medication was employed or required, and in every case the eruption spontaneously disappeared in from a few days to two weeks.

In other cases it will be found that the trouble is due to the child being given potatoes, pies, pastry, pork and all sorts of table-food, preparatory to being weaned, or to assist it to cut its teeth. The child's stomach is unable to digest such food, its gastro-intestinal canal is disordered, and various eruptions appear that are charged to dentition. Dentition is a perfectly natural process, and in the overwhelming majority of cases is accomplished without any reflex or direct disturbance of the system. The cases of eczema attributed to it are numerous, but they are really due to errors of feeding and disorders of digestion.

Cases of infantile eczema, due to imperfect digestion and mal-assimilation, require to be studied carefully. Those in which there is a deficiency in the gastric juice, are benefited by the administration with each feeding of from ½ to 2 grains of pure pepsin, or from 2 to 5 grains of lactopeptine. Nux vomica in doses of from one-quarter to two minims of the tincture three times a day is also valuable. Minute doses of the chloride of iron, or of hydrochloric acid, sometimes yield better results than either pepsin or nux vomica. If diarrhœa exist, small doses of opium or Dover's powders, with an astringent tonic, like cinchona or geranium, will be of the utmost value. In some cases a change of air, as to the seashore or the mountains, will be the most effective remedy. Cod-liver oil will be found of especial value in all patient's that are debilitated, anæmic, or that present any evidences of the scrofulous diathesis. It may be given in half-drachm doses three times a day, or used as an inunction every morning. In many cases, no other treatment will be necessary. The syrup of the iodide of iron is also valuable. The dose will vary from five to twenty drops, according to the age of the patient. It may be given in any convenient medium or in combination with cod liver oil.

Quinine is also an effective remedy, especially in malarious districts and in cases in which the eruption manifests itself during the spring and autumn months. It may be given in the syrup of yerba santa, in doses of from ½ grain to 3 grains once or twice a day. Very often in cases arising from gastro-intestinal irritation or complicated by constipation, marked and rapid improvement can be obtained from the use of minute doses of calomel, alone or combined with a small quantity of jalap resin.

℞. Hydrarg. chlor. mitis..... gr j.
Resinæ jalapæ..... grs. j.
Sacchari albæ..... grs. x.
℥. Make 6 powders.
Sig. One powder every other day.

Podophyllin and leptandrin will also be found serviceable. Castor-oil is a time-honored and an effective remedy. Small doses of syrup of rhubarb or carbonate of magnesia are frequently beneficial. In acute cases accompanied by fever and an increase of the circulation, aconite is potent for good. It will be noticed that I have said nothing as to the use of arsenic in the treatment of the various forms of infantile eczema. The omission was intentional. Arsenic is sometimes requisite in the treatment of obstinate forms of eczema in adults, but in the eczema of childhood it is not only unnecessary, but frequently injurious. For many years I have not employed arsenic in cases of infantile eczema which have come under my observation. I would advise that arsenic be avoided in the treatment of infantile eczema, as its use is often productive of more injury than any benefit it may produce on the disease.

Local Treatment.—In cases in which the itching is a marked symptom, various soothing and anti-pruritic lotions and ointments may be employed. Those which I most frequently order are:

℞. Acidi carbolici..... grs. ij.
Hydrarg. chlor. mitis..... gr. x.
Ung. tinci oxide benz..... ʒj.
℥. Ft. ungt.

℞. Creasoti..... m iij.
Aquæ..... ʒiij.
℥. Ft. loto.

℞. Chloral hydrat..... gr. v.
Aquæ menth. pip..... ʒij.
℥. Ft. loto.

Applications of cold water, ice-water, lead-water and laudanum, or a saturated solution of bicarbonate of soda, will also be found grateful and calmative.

When the eruption has become subacute or chronic, and the integument is covered with crusts, it would be folly to expect any improvement until the diseased surface is exposed to view. The affected region should be covered with a starch poultice, or saturated with oil to loosen the crusts and scales, which must be carefully picked off. Various stimulating ointments may then be applied to the exposed, denuded surface, but care must be taken to avoid increasing the irritation and inflammation. The medicaments employed should be such as will constringe the capillaries and reduce the congestion, while they at the same time form a protective covering for the raw and oozing corium. The subnitrate and the oleate of bismuth and the oleate of zinc, either in powder or ointment form, are excellent applications for this purpose. The ordinary benzoated oxide of zinc ointment alone, with 5 grains of camphor to the ounce, is also serviceable. The following ointment will be found valuable:

℞.	Pulv. opii	gr. iij.
	Acidi tannici	℥ss.
	Plumbi carbonatis	℥j.
	Olei anthemidis	gtt v.
	Adipis	℥j.

Another excellent procedure is to brush a 25 per cent. solution of the fluid extract of geranium over the surface after the scales have been removed. Diachylon ointment, weak tar ointment, cucumber ointment, weak salicylic acid ointment, and the ointment of the carbonate of lead, may also be employed with benefit. Harsh and irritating applications must be sedulously avoided, as they are certain to protract the disease. Cases due to external irritation usually require nothing more than the removal of the irritant and the application of a soothing ointment or lotion to the part affected. Tight, dyed, woolen or flannel clothing should be replaced by articles of wear composed of some less offending material. If wet diapers are at fault they should be removed as soon as soiled, the parts gently mopped dry with a soft cloth, and then dusted with zinc oxide, bismuth subnitrate, or lead carbonate, or painted with a dilute solution of geranium maculatum. If the eruption is due to the scratching and irritation consequent upon the presence of lice, the hair should be cut short, and any of the following ointments rubbed well into the scalp:

℞.	Hydrarg chlor. mitis	gr. x.
	Acidi carbolici	gr. ij.
	Ungt. zinci oxidi	℥j.
℞.	Napthlithol	gr. x.
	Ung. zinci oxidi	℥j.
℞.	Sulphuris sublimati	℈ij.
	Pulv. marantæ	℥j.
	Ungt. aquæ rosæ	℥j.

Cases that are the result of the too free use of soap and water will usually spontaneously subside upon the suspension of the practice. An infant's body should be bathed every day in tepid or warm water, but soap should not be applied to its delicate skin more than two or three times a week.

TWO CASES OF TUMOR OF THE OPTIC NERVE.

Read in the Section on Ophthalmology and Otology, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887.

BY GEO. E. FROTHINGHAM, M.D.,

PROFESSOR OF OPHTHALMOLOGY AND OTOLOGY IN THE UNIVERSITY OF MICHIGAN.

Forty-three cases of tumor of the optic nerve have been reported, of which a large proportion have been sarcomata. Fibromata stand next in order of frequency. Scirrhous carcinoma and genuine neuroma have also been reported.[1] I have met two cases in my own practice, both of which were sarcomata. The following is a brief report of these cases. [The tumors were presented for examination.]

Case 1.—C. A. H., a lad æt. 7 years, residing in East Saginaw, Mich., was brought to me for consultation May 18, 1882. The father gave the following history: About a month previous he noticed that the right eye seemed larger, and that it was totally blind. It had not changed in appearance since the deformity was first noticed. He consulted an oculist, who was in doubt as to the condition. The boy had experienced but very little pain in the affected eye, and was free from headache.

I found the right eye totally blind and affected with slight exophthalmus. Tension normal. Left eye appeared normal, V. = $\frac{20}{20}$, Hm. = 0.75 D. Ophthalmoscopic examination showed the disc of right eye elevated and outline indistinct. The elevation of the disc was estimated as equal to about 1¾ mm. The lymphatic glands of the neck were enlarged, and the patient had the appearance of being affected with scrofula. No tumor could be felt on passing the finger into the orbit as far as practicable. The walls of the orbit seemed smooth, the eyeball being displaced about 3 mm. directly forward, its movements being unrestricted. From appearances I thought a tumor existed surrounding the optic nerve, but of what character could not be determined. The exophthalmus might be due to other changes deep in the orbit. If a tumor existed, the question arose as to whether it was malignant. The question also arose as to whether the enlarged lymphatics were due to scrofula, or were they evidence of malignant disease? I prescribed iodide of potassium and citrate of iron and ammonia, and requested that the patient be brought to me again in two weeks.

June 13, patient returned, feeling much better; appetite improved, and the enlargement of the lymphatics was much less. The outline of the right optic disc is less obscured, but the elevation of the papilla seemed about the same. I directed a continuation of the iodide and iron and added cod-liver oil and a bitter tonic to the medication. September 16, patient returned. Has discontinued medication since July 10. The optic papilla seemed more elevated, but the exophthalmus remained about the same. I advised a return to the previous medication, but after a few weeks, to substitute the syrup of iodide of iron in suitable doses for the iodide of potassium and citrate of iron and ammonium.

[1] Vossius. Archives of Ophthal., vol. xii, p. 294; also vol. xv, p. 133.

From this time to January 13, 1883, the eye remained about the same. It then began to project a little more. The same general plan of treatment was continued, as no operative procedure seemed to be called for. The tumor continued to grow from this time rapidly, and on July 21, an examination detected a smooth, somewhat yielding tumor on pressing the finger into the orbit beside the eyeball. It seemed to be in the pyramidal space, inclosed by the recti muscles, but its exact nature could not be determined. Another examination was requested at an early date. This was, however, delayed until September 1, when the patient was brought to me just as I was about to depart on a journey. The tumor had grown even more rapidly than before, and the exophthalmus was extreme. The general health was good, and the enlargement of the glands in the neck had about disappeared. I advised immediate operation, but it was decided to defer it until my return, which was expected in two weeks. This was unavoidably delayed, and it was not until September 27 that the operation was performed.

The patient being etherized, an incision was made through the conjunctiva and fascia, and the tendon of the internal rectus divided close to its attachment to the globe. The wound being enlarged above and below, the finger was introduced, and a large tumor, involving the nerve, was found to exist, and extending deep into the orbit. The conjunctiva, fascia and tendons were then all divided as in enucleation, and the eyeball drawn outward. The nature of the tumor now became apparent. It was of large size, conical in shape, and involved the optic nerve, extending from its insertion into the globe backward into the optic foramen. With blunt strabismus hook, and other instruments, the tumor was carefully separated from its attachments, and forcibly drawn forward and divided with curved, probe-pointed scissors, as far back as possible. The wound was dressed as after an ordinary enucleation. The patient made a rapid recovery, with no complications whatever.

There was a fair stump for an artificial eye, which was fitted after some months, as he would not allow one to be fitted sooner. Fearing a return of the growth, several subsequent examinations were made, but no enlargements reappeared anywhere in the orbit. On April 26, 1887, I received a letter from the father in response to one I wrote to him inquiring as to the present condition of the patient. He stated that there had been no further trouble, no tumor having reappeared in the orbit, and that the boy was in good health, and had no trouble in wearing his artificial eye. He was nervous and fretful by spells, but was progressing well in his studies, and was active in the usual sports of boys of his age. There was still some slight enlargement of the glands of the neck. As yet there is certainly no indication of intracranial development of the tumor. The other eye remains perfect.

From the appearance of the tumor I feared that it already involved the intracranial portion of the nerve, and that it was malignant in character. The cut end did not look like normal nerve tissue, but was swollen and softened. I gave a guarded prognosis as to the final outcome. The very rapid growth during the last few months added to the suspicion of malignancy. An examination of the tumor showed that it involved the entire substance of the optic nerve, from its entrance into the bulb as far back as the optic foramen. It was about $1\frac{5}{8}$ inch in its longitudinal diameter, and about $1\frac{1}{16}$ inch in its transverse diameter. In structure it is a round-celled sarcoma.

Case 2.—Miss M. W., æt. 19, Grand Rapids, Mich., entered my clinic April 4, 1885, giving the following history: In May, 1884, she had an attack of frontal headache, accompanied by vertigo and a dull, heavy feeling over both eyes, with a slight pain in the left orbit. These symptoms subsided in a few days, except a slight dull pain in the left eye, which has continued up to the present time. Some time after this, sight in the left eye commenced to fail gradually, and the eye appeared to bulge slightly. This exophthalmus has continued to increase very slowly. She could still read coarse print with this eye. The vision of the right eye was $\frac{20}{20}$. The ophthalmoscope showed no abnormal appearance of the fundus, the disc showing no change that could be decided as pathological. The movement of the eyeball was unimpaired and the protrusion was slight and directly forward. The diagnosis was that a tumor probably existed, lying close upon and perhaps involving the optic nerve. As useful vision remained, and as there was no rapid growth of the tumor indicating malignancy, the patient was advised to wait until the size of the tumor, rapid growth, or some other condition should call for or warrant an operation for the removal of the growth. As useful vision existed, and as there was no prospect of removing the tumor without sacrificing the eye, I did not think operative interference then admissible. The patient agreed to return if sight became obliterated and the tumor became more painful, or increased much or rapidly in size.

On March 30, 1886, the patient again entered the hospital, stating that there had been but little change in the eye until about two weeks before her return. The sight of the eye then rapidly failed, and the eyeball became very prominent. The bulging had from that time rapidly increased until the exophthalmus had reached an extreme degree. The bulging was directly forward and the motion of the eyeball unimpaired. There was a constant dull pain in the eye. My diagnosis was a tumor, probably of the optic nerve. An immediate operation was advised.

On April 3, the patient was etherized and the operation performed with careful antiseptic precautions. After a preliminary incision and division of the external rectus, and extending the outer canthus, an exploration was made and the tumor was found to involve the optic nerve. I decided not to attempt to save the eyeball but to remove it, together with the tumor. Subsequent events proved this to be the wisest course. The operation was completed by carefully separating the eyeball and tumor from their connections, drawing the tumor well forward and cutting it off as far back as possible.

The wound was then treated as after ordinary enu-

cleation. Notwithstanding the antiseptic precautions, severe erysipelatous inflammation supervened, and there were symptoms also of meningitis. There was severe headache, and the temperature remained at 103° for nearly two days. On the fourth day after the operation the temperature fell to 101°, and in a few days fell to normal. There was sloughing of cellular tissue, which on the fourteenth day after the operation had entirely separated, and the swelling had subsided. A cavity was thus left that extended to the bottom of the orbit and allowed inspection of the optic foramen, which showed as a depressed surface, with no indication of a return of the growth. This opening gradually closed, but led to such deformity and shrinkage of the stump that no attempt was made to fit an artificial eye. An examination of the tumor showed it to involve the optic nerve from a point commencing about half an inch back of the eyeball and extending from that point back into the optic foramen. The tumor itself was a little more than 1½ inch long and a little more than an inch in its transverse diameter. A microscopic examination showed the tumor to be a round-celled sarcoma like that found in *Case 1*.

The following drawings, prepared by Prof. C. H. Stowell, who kindly made the microscopic examina-

Free Cells, from soft portions of Tumor.

tions for me, represent the character of the growth. Prof. Stowell makes the following report of the result of his examinations of the tumors: "An examination of the tumors you gave me, and labeled Nos. 1 and 2, results as follows: Both growths are of the same structure. An examination of the cellular elements shows a vast number of small, round, nucleated cells, with a few spindle-shaped cells. Sections of these tumors show a stroma of delicate connective tissue. For the most part this framework is quite scanty; in one of the growths, near the periphery, it is quite firm and dense. In this delicate fibrillar framework, there is a more or less granular intercellular substance. Both of these growths represent a *round celled sarcoma*. Considering their location, however, they might be classed with the '*gliomata*' of Virchow. As I fail to find evidences of myxomata, and as the sarcomata are so marked, each might properly be called a *sarco-glioma*."

Stroma and Cells, from denser portions of Tumor.

In reply to my letter of inquiry the patient wrote, on the 18th ultimo, that there has never been any pain since her recovery from the operation. There has been no return of the tumor within the orbit, and she is perfectly well.

Sarcomatous tumors involving other structures of the orbit, excepting when within the eyeball itself, are, in my experience, very liable to recur, especially in children, even when completely extirpated. When not completely removed, the operation seems to stimulate the growth.

In the cases here reported I had great doubt as to whether or not the tumor involved the intracranial portion of the nerve. As yet there seems to be no indication of intracranial development. Certainly it could not have been stimulated to more rapid progress by the operation.

In a recent case reported by Vossius (1885), where a myxo-sarcoma of the optic nerve was removed, the patient made a good recovery in six weeks, though the neoplasm had apparently not been completely removed from the optic foramen. Such cases would seem to indicate that sarcomata of this structure have a less malignant tendency than when involving other tissue.

GASTRO-INTESTINAL HÆMORRHAGE IN THE NEWBORN.

BY HENRY B. HEMENWAY, A.M., M.D.,
OF KALAMAZOO, MICH.

I desire to present the records of two cases of a type of disease fortunately by no means common. I am led to suspect that the malady may be far more frequent than we know, owing to occasional difficulty of detection by one not on the lookout. The first case I report occurred in my own practice and in

my own family. As I look back upon it, I see that had I been as watchful as I might have been I would have discovered the evil full 40 hours before the time I first suspected it. That lost time was precious. I will not say that had the case been recognized from the first the little life would have been spared, but surely its chances would have been better. I had never known of such a case. A medical friend who was present at the birth of the babe looked through his entire library and only found a slight mention of the disorder, with the comment that the disease was so rare that more space could not be spared for its discussion. Another, who performed the post-mortem examination, a physician who has had a large practice for many years, told me that the malady was one heretofore unheard of by him. Still another, who graduated in medicine in the "fifties," told me that he did not remember ever to have heard or read of such a case. The fifth doctor to know of this little history was one whose hair the suns of more than the allotted three-score years and ten have whitened, and he has instructed a grandson in the practice of our art. He had a vague memory of having somewhere read or heard of such a case, but had never personally known of one.

The fact that the ailment is not often met with is no excuse for passing it over lightly. One may meet it any time, and he will have no time to read up. The rarity of the affection is therefore a reason why it should be most closely studied.

I desire to report these cases for two reasons: First, to prevent others from being as ignorant as I was. Secondly, to learn from a discussion of the subject by those of a wider experience than mine how such cases may be prevented, and if they occur, how they may be cured.

Case 1.—At 4 A.M., Tuesday, March 24, 1887, Mrs. H., primipara, æt. 26, was delivered at term of an apparently healthy female child, weighing about 4½ pounds. The mother is a brunette 5 ft. 5½ in. high, and weighing ordinarily only 115 lbs. Her general health is and has been good, excepting a tendency to that state called "nervousness." She walks erect and with a free, easy gait. She has never been in the habit of wearing corsets, and during the time the child was being carried she did not wear her clothes tight. Previous to her marriage she was troubled with habitual constipation. After marriage she had none of this trouble until she became pregnant. During that whole period she was obliged to use various means for keeping her rectum empty. Since childhood, in spite of this constipation, she had not been as well as during this period. She had no unusual nausea or bad feelings of any kind. She could walk with ease and was much of the time in the open air. For her constipation she took in the line of drugs salts, aloin, strychnia, belladonna, oleoresin of capsicum, cascara sagrada, podophyllin and senna. During the last months she used especially an elixir containing the three last named drugs. She is one of four girls—no brothers—all similar in build, and healthy. Their father, a Scotchman, always healthy until his last years, when he became rheumatic, died at the age of 51 of erysipelas. Their mother, of Yankee and Virginian parentage, is to-day in fair health. So far as known there is no hæmorrhagic diathesis in any member of Mrs. H.'s family, further than that one of the sisters has been troubled with menorrhagia, and for a time she herself was similarly afflicted.

Mr. H., father of the child, dark-complexioned, æt. 30, born in Vermont, height 5 ft. 8¾ in., weight 138 lbs. Though never robust, yet has had good health for the last dozen years. In constitution he resembles his father, also a Vermonter, dark-complexioned, never robust, height 5 ft. 8 in., weight 142 lbs.; lived a literary life and died of pernicious anæmia at the age of 53. In the opinion of the late Dr. J. S. Jewell, consultant, this anæmia was due to capillary hæmorrhages into the duodenum. Frequently during the last year of his life, when he came back from stool, he would say, "What passed me was as black as your shoe." The mother of Mr. H. is still living, in good health, æt. 59; she had two other sons, no daughters. One child died at the age of 4 months of cholera infantum. The other is well, æt. 17. Mr. H. never showed any tendency to hæmorrhagic diathesis. By a former wife he had a daughter, always strong.

Mrs. H. began to have pains about 10 P.M. March 23. Examination showed a vertex presentation, in the L. O. A. positon. The first stage ended at 3:15 A.M., and the bag of waters broke about 3:45 the next morning. In two or three pains more the head was born, and the pain continued until the body was also delivered. The cord was of ordinary length. It was not tied until pulsation through it had about ceased. The baby began to cry before her feet were out, and at the same time she passed a large quantity of what looked to be normal meconium. She was tall and slim, and though small, she seemed unusually strong. She took well to the breast, was bright and slept well. She was neither rocked, walked with, nor jolted, but laid down quietly to sleep. During this day and the next she had several passages, all being the same in general appearance.

On Friday afternoon she cried some and the nurse thought she had colic. I could detect no bloating of the abdomen, but prepared a little peppermint in water, with instructions not to use it unless it was necessary. We were unable to explain why the liver should be so active. The crying increased. At 2 A.M. Saturday the nurse noticed that the water she washed the child off with was tinged with red. I examined the discharges, but could not detect any trace of blood by the artificial light and unaided vision. At 5:30 we could see the red coloration in the discharges. At 2 o'clock I suspected, and at 5:30 I diagnosticated, capillary hæmorrhage into the small intestines. We then remembered that there were two small red stains in what she had spit up. I therefore concluded that hæmorrhage had been taking place from the mucous membrane, probably of the duodenum, for an unknown period before birth. That it did not occur in the large intestine, nor as the result of injury, was made probable from the fact that the blood was so nearly digested.

In the line of treatment I could not get satisfac-

tory information from any work consulted. I feared to use strong astringents in the alimentary canal of so young a patient. I advised, therefore, the application of warm flannels to the feet, and the administration internally of fluid extract of hamamelis, tr. opium and fluid extract of ergot, and the occasional administration of cold water. At first I gave the medicines in the water. Later I gave the hamamelis alone in 20-drop doses every half-hour, and water occasionally between times. Friday P.M. and during that night she did not nurse as well as formerly. After giving her a few doses of medicine the discharges checked, and Saturday forenoon and about noon she nursed well and seemed stronger. After that she did not nurse so well again, the discharges came more frequently, and the strength failed considerably. From that evening until she died she was fed entirely by the spoon. Sunday morning her breathing was regular and her pulse good. She gradually lost strength until about 11 P.M., when she seemed to be dying. I have never seen such a struggle with death. Several times she seemed to be taking her last gasp, and then after a short rest the respiration would again begin. For five hours the battle lasted, and at 4 o'clock Monday morning, just four days from the time of birth, the little spirit left its cage.

At 9 o'clock, five hours after death, my friend Dr. J. M. Snook performed a post-mortem examination. We found fair rigor mortis. There was nothing peculiar in the external appearance except emaciation. I regret to say that the thorax was not opened. We found little adipose tissue. The colons were firmly contracted, and the entire large intestine empty. By inspection we could see no indication of disease except in small intestine. We could find no apparent obstruction to the portal circulation. The mucous membranes of the stomach, duodenum and jejunum were apparently healthy. In the upper portion of the ileum the mucous membrane showed general extravasation of the blood, the membrane being dark and presenting numerous dots where the hæmorrhage had occurred. The lower portion of the ileum was healthy, and also the mucous membrane of the colons. It is not impossible that the disease had extended farther up and that the medicines had partially corrected the evil. We were inclined to think so. There was no ulceration or perforation of the bowel.

Case 2.—Dr. H. B. Osborne, of Kalamazoo, has kindly given me the history of this case from his own practice. A well-formed child was born about 6 A.M. one Sunday. The parents were about 25 or 30 years old, both light-complexioned, and in good health. Mrs. D., the mother, is quite inclined to be habitually constipated, and while carrying the child she occasionally took cathartics and laxatives. She is slight in build, but did not compress her body while carrying the child. She has since had a child, now several months old, that is well and strong. Mr. D. lost a brother some time ago from consumption brought on, he says, by exposure. So far as known this is the only case of hereditary disease in either family, and no member of either family has shown a tendency to hæmorrhagic diathesis. Two months before time Mrs. D. came near being confined as the result of over-exercise. This child was born after a comparatively short labor; breech presenting. After the breech was born the labor was finished quickly by the doctor. The cord was short, and at time of birth there was some traction upon the umbilicus. All seemed well, however, until Monday afternoon. The doctor saw the child at noon and all seemed well. I think he was called about 2 o'clock, and at that time the nurse showed him a clot of blood that had just been passed per anum. He administered ergot in solution, and perhaps some other remedy, but the child died about 8 o'clock Monday evening, 38 hours after birth.

Dr. O. was inclined to think that in his case the hæmorrhage was caused by traction upon the umbilicus at time of birth. In my case I am inclined to think that the trouble was due to the use of drugs to regulate the mother's bowels. That it was not due to causes at birth is shown from the fact that the hæmorrhages probably took place before birth. These *ante natal* hæmorrhages may explain the light weight of the child. It is not impossible, considering the grandfather's death, that there is an hereditary tendency in that direction.

In the line of treatment there is little to be said. Were I to treat another case I would use hamamelis, perhaps strengthened with a little tannic acid, and ergot. I would put confidence in the former in proportion as the trouble seemed to be high up. I should aim to give 1 teaspoonful of the hamamelis every hour, and about 1 drop of ergot per hour, according to symptoms. I would use milk to sustain the strength. I used in my case a little brandy, but I was not pleased with its effect. What is needed is *food*, not stimulants. Cool drinks should be prescribed, as the effect of cold is refreshing and salutary. The extremities must be kept warm by artificial means if necessary. The child must be kept quiet. If it is much restless or in pain I would give tr. opii, gtt. j in water, according to symptoms. Should the hæmorrhage occur in the stomach, as shown by hæmorrhagic emesis, I might give a few doses of mineral astringents, and were the trouble clearly located in the large intestine I should probably give a moderately strong astringent enema. Generally speaking, however, I think mineral astringents are too irritating to use in this disorder. The hæmorrhage may be checked only to give place to a more lasting and painful disorder.

LAVAGE IN THE TREATMENT OF GASTRIC AFFECTIONS.

Read before the Philadelphia County Medical Society, November 9, 1887.

BY SOLOMON SOLIS-COHEN, M.D.,
OF PHILADELPHIA, PA.

Any agent, or any method that promises to enlarge our therapeutic resources against those obstinate conditions of "gastric catarrh," "functional dyspepsia," etc., that are a source of distress to the patient, of annoyance to the physician, and of profit to the

pepsin and patent-medicine manufacturers, deserves at least a respectful consideration. The method that I desire briefly to present to the Society this evening—lavage, or irrigation of the stomach—has been employed for many years in Europe, so that it can no longer be considered to be merely on trial. In America, however, it has not won general introduction, nor am I aware that any discussion of it has been had before this body. This, then, is my excuse for calling attention to a subject in connection with which I have nothing new to communicate.

It needed not the discovery of omnipresent bacilli, those evil spirits named "legion" of our modern superstition, floating about, "seeking whom they might devour," to enforce the value of cleanliness. The surgeon long ago discovered that clean surfaces would unite more promptly, that a wound kept free from foreign substances and irritating secretions, would undergo a more rapid and more satisfactory course toward repair, than if the conditions were otherwise. In the treatment of the more readily accessible mucous surfaces, whether of the eye, the nose, the throat, the vagina, or the urethra, the importance of keeping the parts free from morbid secretions, from the products of desquamation, and other sources of irritation, is not a matter for debate. The extension of the same principle to the treatment of affections of the gastric mucous membrane, is but a question of mechanical detail, not of therapeutic justification.

Kussmaul, in 1867, employed a doubly-acting stomach pump to irrigate the stomach with alkaline solutions (Carlsbad water), and it is to this observer that we are principally indebted for a study of the method, mechanically and therapeutically. It is said, however, by Dujardin-Beaumetz, that a French physician, Blatin, had proposed the practice in 1832. It is to another French observer, Fauché, of Paris, who communicated his procedure to the Academy of Medicine in 1879, that we chiefly owe the simplification of the technique by the use of siphonage; a process employed independently by Oser, of Vienna, at about the same time. Others have variously modified the details of instrumentation and practice. Among those that have contributed most to the popularization of the method, is Dujardin-Beaumetz, who applied to it the name *lavage*, by which it is now described.

The manner of performing lavage, recommended by the latter observer, is that which I have followed in the few cases in which I could induce private patients to submit to it. The results obtained in these cases have been sufficiently encouraging to induce me to continue, at least to propose it, wherever it seems applicable.

The apparatus and its employment are sufficiently simple. An œsophageal tube with blunt, double-eyed extremity, of flexible rubber, about twenty-eight inches long, and from one-quarter of an inch to a little less than half an inch in diameter—practically an enlarged catheter, and made of similar (the one exhibited having been made by Tiemann & Co., of New York)—is attached by a small section of glass tubing to a soft-rubber tube about one yard in length, into the free extremity, of which a glass or rubber funnel, of from six ounces to eight ounces capacity, is inserted. Sometimes the free extremity of the œsophageal tube is slightly stiffened.

The patient sits, or stands, facing the physician. The œsophageal tube having been dipped into warm water or warm milk, is placed within the entrance of the œsophagus, and is then propelled by successive pushes into the stomach, the process being facilitated by efforts at deglutition on the part of the patient.

Many patients quickly learn to introduce and swallow the tube without assistance. A mark on the tube shows when a sufficient length has been introduced (say eighteen or nineteen inches). The funnel is then elevated to the level of the patient's forehead, and from a pint to a quart or more of the lavage solution is slowly poured in; the glass junction tube permitting its passage to be watched, and obstruction or attempted regurgitation to be detected. The patient's sensations will usually inform us when a sufficient quantity of the solution has entered the stomach. As the last portion of liquid disappears from the funnel, the soft-rubber tube is pinched near the extremity, the funnel is rapidly inverted over a receptacle placed upon the floor; and the contents of the stomach are thus removed by siphonage. These manœuvers are repeated until the returned fluid is clear.

The first introduction of the tube, and possibly the second and third, will occasion more or less dyspnœa, often nausea and retching, rarely vomiting. These effects, though partly physical, are largely psychical, and will disappear with tolerance. The dyspnœa may be immediately checked by insisting on full inspirations. Nausea is overcome as soon as the water enters the stomach, floating the tube away from immediate contact with the mucous membrane. In highly neurotic subjects, it may be well to prepare for the operation, at first, by administering full doses of bromides. I have tried anointing the end of the tube with a solution of cocaine in glycerin, but cannot claim any striking benefit from the procedure. Firm, but skilful handling of the tube is the best sedative.

Sometimes during the withdrawal of the solution, solid particles of food (grains of corn in one of my cases) may become impacted in the eyes of the tube, and the flow of liquid will cease. A little more of the solution must then be introduced, both to wash away the obstruction and to reëstablish the syphon current. If the tube should be pushed too far into the cavity of the stomach, it may curve upon itself, and the siphon will not work. Withdrawal of the tube for a few inches, will remedy this; if the flow is not readily established, it is said that it may be favored by manipulation of the stomach, and efforts at coughing may be made by the patient. I have not had occasion to resort to these devices.

When *lavation* alone (washing) is the object of the procedure, a weak alkaline solution is employed; a drachm or two of sodium sulphate, sodium chloride, sodium borate, or sodium bicarbonate, in a quart of warm water, at about 100° F.

Should it be considered necessary, however, vari

ous sedative or antiseptic medicaments may be added to the lavage solution. Those most highly recommended are resorcin (1 per cent.), borac acid (1 per cent.), creasote (1 per cent.), carbon disulphide water (one part of a solution containing 15 grains to the quart, to two parts of water), charcoal powder (two to four tablespoonfuls), chloroform water (saturated), bismuth subnitrate (two tablespoonfuls to the pint).

In the use of agents like resorcin, carbolic acid, etc., the liability to absorption if the solution be not all removed, must not be forgotten. In using what he terms "milk of bismuth," Dujardin-Beaumetz advises that the solution be allowed to remain a few minutes in the stomach, so as to allow the bismuth to be deposited; after which the supernatant liquid may be withdrawn.

Lavage should be performed when the stomach is empty; therefore, some authors recommend the hour of rising in the morning. I have found noon—say four or five hours after a light breakfast—or the same interval after lunch or dinner, to be more convenient for myself, and to answer as well in most instances.

One lavation daily is usually enough. After a while the intervals may gradually be lengthened, until the process is discontinued.

The therapy is sufficiently obvious. The effects are said to be most marked in cases of dilatation of the stomach, in which delayed digestion, retention and putrid fermentation of the contents of the stomach, give rise to distressing symptoms. In all cases, in which the gastric mucous membrane is in a catarrhal condition, coated with the glairy mucus seen amid vomited matters, or bathed in the sour liquid ejected as "water-brash;" in which the production of gastric juice is impeded, or the secretion altered in quality by an abnormal condition of the membrane, extending, perhaps into the tubules, or by the presence of irritative matters; in which fermentation of ingested and retained matters takes place; in short, in the typical case of chronic gastric catarrh or acid dyspepsia, lavage will be found highly useful. It removes any undigested matters remaining in the viscus, cleanses it from products of desquamation and morbid secretion, and gently stimulates the glands and absorbents to healthy action. In gastralgia, dependent upon the presence of irritating matters, and sometimes in cases apparently idiopathic, lavage with the employment of chloroform or bismuth as a sedative, is said to be productive of cure. I have had no opportunity to test the statement personally.

In the chronic gastritis of drunkards, the measure is said to be an excellent palliative, nor is hæmatemesis considered a counter-indication, unless actual ulceration exists. In cancer of the stomach it is useful as a palliative measure; and my first practical acquaintance with this method of treatment was made during my student days, in two cases of gastric carcinoma treated after the method of Kussmaul, with doubly-acting stomach-pump, at the hospital of the Jefferson Medical College, in the clinic of Prof. DaCosta.

Within the last few years two new applications of the lavage method have been found. In 1885, at Kussmaul's clinic, and subsequently by Senator, Rosenthal, and other observers, it has been successfully employed in the treatment of ileus. Kussmaul explains this result by the theory of relief to the tension above the point of constriction, caused by gases and accumulated fæces; with concomitant restoration of normal peristaltic action. Since 1884, Leube and other observers have made chemical and microscopical examinations of the gastric secretions and other matters removed from the stomach at various periods of digestion, and claim to have thus obtained valuable diagnostic indications. This subject, however, is beyond the scope of the present communication.

While the practice is usually confined to chronic cases, I have had occasion to resort to it in one case of acute indigestion with obstinate vomiting, in a phthisical, slightly hysterical, female; with gratifying result—in that the vomiting, rebellious to diet and medication, yielded to two applications of the stomach tube. In this case, before withdrawing the tube, warm milk was introduced into the stomach; a measure advocated by French writers. Indeed, there can be little doubt, but that in connection with *gavage*, or forced feeding, irrigation of the stomach assists in maintaining nutrition in phthisis and other wasting diseases.

ASEPSIS AND ANTISEPSIS.

BY HORATIO R. BIGELOW, M.D.,
OF WASHINGTON, D. C.

I have read Dr. Ellzey's article "Antiseptics in Medicine and Surgery," in THE JOURNAL, of Oct. 8, with more than usual interest, and it is in no spirit of hypercriticism that I object to certain inconsistencies. Truth being a correspondence between the order of ideas and the order of phenomena—a just equipoise, so to speak, of the *internal* and *external*, we can only test it by *experience*, and the measure of its worth must be its *verification*.

Dr. Ellzey has no faith in the surgical antisepsis that obtains largely in most surgical clinics, because the strength of the solutions employed is not germicidal, to be germicidal they would be dangerous to life. He uses, nevertheless, sponges, instruments and dressings which he claims are aseptic. Has he ever tested his armamentarium with sensitive plates, to see if all the parts thereof were sterile? Has he ever tested his hands and arms just before an operation? Has he ever satisfied himself of the primary sterilization of the catgut? Has he examined the air of the operating room? (See interesting observations made by Dr. Fenger, of Chicago.) Of what use is it to discard antisepsis in the one case and to practice asepsis in another, unless there be absolute certainty of sterility. Dr. Fenger says: "What influence the asepsis of the material has on the result of the operations as to death or recovery is a question far beyond the scope of these investigations. It would require a large statistical material of well ob-

served cases, and more work than could be done by one observer. But it may be safe to conclude that it is desirable to work through an abdominal operation with perfect asepsis everywhere, if such a thing is possible. The above investigations have shown that such perfect asepsis can be obtained." The asepsis practiced by Dr. Fenger are as follows:

1. Preparation of operating room; 1-1,000 sublimate used.
2. Preparation of operator and assistants; 1-1,000 and 1-2,000 sublimate used.
3. Preparation of sponges.
4. Testing sponges before used.
5. Testing catgut.

The sponges and silk were also tested as to their sterility after operations. Dr. Sternberg recently published an exceedingly valuable paper upon the heat death point of bacteria, showing that the viability was variable.

The same holds true of the chemical agents used as germicides; some bacteria being very much more susceptible to the toxic influence than others. Of what use is *cleanliness*, if it be not synonymous with antisepsis? Why wash the parts before the operation if it be not with the hope of an aseptic surface? But cleanliness *alone* is not *asepsis*, it is simply a just regard of the great moral canon, which in later days has also grown to be a physiological canon. It is done with the primary hope of depriving the parts of that necessary wherewithal for the growth of bacteria. It does not kill them, it simply modifies the nutrient. Add to this, however, subsequent washings with ether (or lemon juice), and the mercuric chloride, and we not only arrive at an *aseptic* surface, but we have reason to believe that we have killed out any pre-existing colonies. We have taken superfluous fat and dirt from the skin (which washing alone with water and soap will not accomplish) which are favorable nutrient media, and we have destroyed any germs, without detriment to the patient's health.

We have then an aseptic *surface* and an aseptic *environment* (if all the precautions mentioned by Fenger, and observed by careful surgeons generally, have been attended to), two factors which could not possibly obtain from the use of soap and water alone. But although the patient, operator and assistants may have taken sublimate baths just prior to the operation, their exposure to the air, if only for a moment, may make them carriers of germs—and colonies will often appear in the room during an operation, which were absent in the beginning. Hence in many operating rooms a strong carbolic spray is kept playing during the entire duration of an operation, *not as a germicide*, but to prevent so far as possible the development of germs from extraneous sources, in a room which had been rendered aseptic. Iodoform largely used as a dressing *is* a germicide of suppurative cocci, not only so, but it prevents the wound from furnishing the suppurative changes which are absolutely necessary for the development of the cocci. Salicylic and boracic acids used within the abdomen as germicides, have not been followed with bad results, so far as my observation shows me. Mercuric chloride I have never seen used within the cavity more than three or four times, and then in small quantity. It was followed by no bad results. Within the vagina I have seen it used, in all of the accepted strengths, for long periods of time, without bad results. I believe that it is *quite* possible to reach all parts of the vaginal tract, by intelligent irrigation, and to rid it of germs by the employment of the mercuric chloride, and although I have seen many hundreds of plastic operations on the utero-vaginal tract in which mercuric irrigation was resorted to, I have never known of one that suffered therefrom.

There seems to be really very little real distinction between the two words viewed in the light of general acceptance and practice. Dr. Ellzey's *asepsis* is merely modified antisepsis. An instrument or sponge is rendered aseptic through antiseptic precautions, whether this be accomplished by chemical combination or merely by hot water. He uses on instruments and dressings precautions of chemical equivalent which he denies to the body. He therefore simply limits his range and practice of antiseptics—for if hot water will prevent sepsis in a certain sense it may be said to be antiseptic. Surgical cleanliness and surgical antisepsis are synonymous terms. Water or soap and water are not adequate, especially inadequate are they as applied to instruments. The germicidal property of the antiseptic is not the only thing aimed at. It is used as a preventive of incubation, and as a preventive of such process we aim at *perfect* cleanliness. Constant irrigation with a 1-2000 mercuric chloride solution or a 2 per cent. carbolic solution upon the vagina are rarely, if ever, attended with bad results. Perfect cleanliness, with all that it implies, is best obtained, according to my ideas, and generally obtained by the use of a chemical. Boiling water in an *aseptic* room is antiseptic, but there is always an ever present probability that the water may become impregnated from the surrounding atmosphere. Kept at the boiling point and immediately used at this temperature is almost impossible, and constant irrigation with it is not practicable. Now the entire object of the after dressing is to exclude atmospheric conditions. The air then *does* contain a something to be feared, and why use every possible means to avoid a disastrous contingency *after* an operation that is always present while the patient is on the table?

We use *antiseptic* dressings to prevent the formative tissue changes that develop and keep vital germ life, and not solely and simply to exclude air. We are never sure that our operating room is aseptic, hence the possibility of latent potency in the air itself—only awaiting the degenerative process to become active. We *sterilize* the wound in the best way that intelligence dictates to prevent the changes that are fertilizing elements of bacteria. They that rail at antisepsis and cry for cleanliness are really playing upon terms. They both arrive at the same end, by almost the same logical process that the surgeon does who uses the sublimate; for surgical cleanliness implies surgical antisepsis.

The only question is, How best may we obtain surgical cleanliness? Are these microörganisms the specific source? What relation do the "ptomaines"

bear to the poisonous processes? To what extent may mental conditions engender the pathological processes we now attribute to "ptomaines?" Bacteriology, though still in swaddling clothes, is fast learning to walk alone. To the surgeon the infant has been as great a surprise as was the Great Physician to the Hebrew doctors. It has given them a knowledge of the destruction of these organisms outside the body. Dr. Ellzey says we do not know the optimum of temperature for septic germs. Dr. Steinberg's tables are fashioned to meet just such doubts. To his objections of the strength for germicidal properties of the mercuric chloride, it may be said that we have a more than approximate knowledge not only of the strength of the chloride necessary to act as germicidal in the different kinds of microörganisms, but that this investigation has embraced many of the other chemical agents employed for similar purposes. There can be no single test of germicidal strength. Spores are often wonderfully resistant, and the spores of anthrax require much stronger solutions than do spores of other germs. The spores of anthrax are the only ones that resist the action of creoline. But pus germs and the usual run of bacteria with which the surgeon has to do battle, are more easily affected.

Dr. Ellzey writes, "It is for the destruction of bacteria and their spores that we use antiseptics." This is but a partial statement of the case, since in their use we also hope to change the media, or rather to preserve the media at normal, so that the pathogenic bacteria may not develop. Dr. Ellzey further says, "The use of carbolic acid should be confined to the disinfection of instruments, and for this purpose its strength should be rather more than 1 to 10." The statement seems to me to be unsound, In the first place it may be doubted if this strength would make a contaminated instrument thoroughly aseptic. The most reliable agent is dry heat; and the most convenient apparatus a Koch's sterilizing oven. There are spores that resist a 10 per cent. carbolic solution, and hence for germicidal purposes we use the bichloride. That a few, a very few deaths in comparison with the thousands treated, may have been directly due to mercuric poisoning may not be gainsaid, but we do not discard ether, chloroform or opium because deaths have resulted from their use. Individual susceptibility and idiosyncrasy is not always discoverable beforehand. I have seen the mercuric solutions in strength from 1-1000 to 1-5000 in many hundreds of plastic operations, with irrigation lasting from fifteen to forty-five minutes, without any bad results. I have seen tests made upon the vaginal secretions just after such irrigations in which no pathogenic germs were discoverable. I have seen certainly four or five hundred women whose uteri were curetted and in whom uterine mercuric irrigation was before and after the operation and there were no symptoms of intoxication. I have seen its employment in Spaeth's and Braun's wards in Vienna for three months, and heard of nothing untoward though the material was vast. Ehrendorfer frequently introduces pencils containing 70 grains of iodoform into a uterus, after labor, without any symptoms of iodoform intoxication. Martin's operating room is always thick with carbolic spray, but he never has had unpleasant results although some of the spectators present found it irritating.

But after all, the discussion is hardly necessary for Dr. Ellzey's asepsis is very good, though limited antisepsis. He renders his hands, arms, sponges and silk aseptic by antiseptic means, and washes the part to be operated upon with mercuric chloride. It would be well for surgery in general if all surgeons would be equally conscientious.

Berlin, Oct. 27, 1887.

RAPID DILATATION OF THE CERVIX UTERI; ITS AGENCY IN THE TREATMENT OF FLEXIONS, STRICTURE, CHRONIC ENDO-TRACHELITIS, CONICAL CERVIX, DYSMENORRHŒA.

Read before the St. Louis Medical Society, Nov. 26, 1887.

BY YOUNG H. BOND, M.D.,

GYNECOLOGIST TO ST. LUKE'S HOSPITAL, CONSULTING PHYSICIAN TO ST. LOUIS FEMALE HOSPITAL, ST. LOUIS.

To Dr. Mackintosh, of Edinburgh, is due the credit of having first directed the attention of the profession to the mechanical cause of certain cases of dysmenorrhœa, and the suggestion of mechanical means for its relief, consisting of gradual dilatation of the cervical canal by means of flexible bougies, or by metallic rods of gradually increasing volume.

Rigby was the first to use a dilator with steel blades, which were opened and left for some time in the cervix. Raynaud, of Montauban, Simpson, Sims, and others sought to accomplish the same ends by the use of different materials, as dilators, such as metallic stems, wax bougies, aluminum and other metals. Simpson and Sims lived to repudiate this method of treatment, and substituted therefor incisions. In 1871, Dr. J. Protheroe Smith, of London, in setting forth his plan of treating certain cases of dysmenorrhœa and sterility, said that after giving Dr. Simpson's plan of incision a fair trial, he gave up the use of the hysterotome, and adopted forcible dilatation, using a dilator made after the model of Heurteloupe's lithotrite, by which he conceived it practicable to dilate permanently the constricted os internum, and afterward, when necessary, to give the normal shape to the os tincæ, by dividing it laterally at the commissure of the labia uteri.

He confined this treatment to simple stricture of the os internum, and narrowing of the cervical canal and os, excluding as inapplicable all cases, even of this class, until all inflammation of the parts had been relieved. His method consisted in accustoming the uterine canal to the presence of a metal bougie, introduced daily, of increasing size to a number 10; then the dilator was employed cautiously every second day, desisting from dilatations so soon as pain was produced.

Proceeding in this way, in the course of a few days or weeks, as the case might be, he succeeded in dilating the canal to the extent of an inch or an inch and a half. After this the dilator was used daily

for two or three days, and afterwards at increasing intervals, to maintain the patency of the parts until they permanently healed in the state of distension.

In 1873, Dr. John Ball, of Brooklyn, read a paper before the King's County Medical Society, of N. Y., advocating dilatation of the cervix uteri in a far more rapid, forcible and heroic manner than had even before been supposed prudent or admissible, and recommending it as a means of relieving stricture, endo-cervicitis, flexions, etc. Accompanying this paper was the report of a number of cases of mechanical dysmenorrhœa dependent upon the above conditions that had been completely cured by this daring mode of treatment. Dr. Ball accomplished at one sitting, or treatment, what Dr. Smith achieved by gradual steps; the one gave to the operation an extensive field of application, the other a limited one.

The method as practiced by Dr. Ball, with variations of devices and technique, and its indications, as presented in his paper, has received the sanction of all that have practiced it sufficiently to judge of its merits.

Its utility and worth are fully recognized by the daily practice of such men as Goodell, Wiley, Marcy, Ellinger, Schultze, and others. Almost without exception, they that have had extensive experience in this method of treating mechanical dysmenorrhœa, and the inflammatory states of the uterus originating therefrom, speak in the most encouraging manner of its efficacy and safety, while its chief opponents are to be found opposing it upon theoretical grounds, and not because of any adverse experience in its practice.

The practical ends of most cases in which forcible dilatation is indicated, can be met by one of two degrees of dilatation, viz.: dilatation to a moderate extent, sufficient to permanently increase the cervical canal, of relatively moderate insufficiency, to admit the use of the curette, of the ready and efficient application of remedies to the endometrium and cervical mucous surface, to facilitate explorations of the uterine cavity, etc., this method of dilatation I daily practice at my office.

The second degree is that of divulsion, the practice of which always presupposes the use of ether or chloroform; its chief indication is to be found in the cure of flexions, and conditions incident thereto; the ready and thorough exploration of the uterine cavity, for diagnostic purposes; to facilitate the removal therefrom of tumors, growths, etc., for the relief of conical and elongated cervix, stricture and consequent sterility.

Before detailing the minutiæ of my method of procedure in using rapid dilatation it may be well to remind you in a general way of the modes of treatment in general use for the relief of those forms of mechanical dysmenorrhœa involving a diminution or interruption to greater or less extent of the uterine or cervical canal.

The generally recognized treatment, for a number of years since, has consisted in either dilatation or incision. The methods of dilatation, gradual and rapid, the means of the former, sounds, specula, tents, sponge, sea-tangle and tupelo; the means of the latter, expanding instruments, Ellinger's, Wiley's, Goodell's, Sims', Schultze's, Wathen's and others; incisions are practiced after the method of Simpson, by means of the hysterotome, or by Sims' method, or by the combined method. The unsatisfactory results from the use of sounds, the failure to effect continued perviousness of the canal, has caused them to be well nigh discarded in this connection.

Tents are still used to a considerable extent, notwithstanding the fact that they are sadly disappointing in results sought for, a common feature of failure with them all is a want of permancy of the dilatation accomplished. Their action is slow, tedious, and uncertain, involving much loss of time with very little, if any, compensating advantage. The sponge tent as a dilating agent, is the most efficient of its class, and at the same time the most dangerous, because of the liability to septicæmia from its use, a result that has followed in an uncomfortably large number of cases.

Notwithstanding the indulgence of much ingenuity in their antiseptic construction and use incisions are wrong in principle, in some instances necessarily uncertain in extent of tissue divided, more or less dangerous, and unless immediately followed by the plug or stem pessary, or by the daily use of the bougie or dressing-forceps, utterly fail of their purpose.

From practical observation and experience, I have become fully committed to the propriety, wisdom and efficiency of rapid dilatation for the relief of all forms of what might appropriately be termed obstructive dysmenorrhœa, conditions embraced in stricture, conical cervix, flexions, etc. There are those that advance extravagant claims for electricity in the treatment of the conditions that I have enumerated. I regard it as an important subsidiary agent, but as a principal agent of treatment I do not believe that it is comparable to divulsion in the correction of strongly established flexions. I regard it as a most important means in the effectual treatment of endometritis, and of permanent value in the relief of that hitherto most obstinate and persistent disease, endo cervicitis. I believe it to be the only means of radically curing firmly established flexions; certainly it is the only means that end in my hands.

In practicing forcible dilatation to a moderate extent no anæsthetic is needed; perfect antiseptic precautions should be observed; exercise immediately thereafter, beyond a moderate extent, should be prohibited. The method that I pursue in practicing dilatation in the second degree, that of divulsion, is the following:

Having previously by careful examination excluded the possibility of any extra-uterine inflammation or condition, neoplasm, etc., that might contra-indicate the measure, regard being given to the proper evacuation of the bowels and bladder, and all needed instruments immersed and kept in a 5 per cent. solution of carbolic acid pending the operation, pledgets of absorbent cotton pressed out of a bichloride solution, 1:2000, just ready; the patient being thoroughly etherized is placed in the Sims' position, the vulva and surrounding parts are sponged off with a 1:2000 bichloride solution.

A Sims' speculum being introduced, the vagina, cervical and uterine canals are thoroughly cleansed with the bichloride solution, the anterior lip of the cervix is seized with a double-hooked tenaculum and drawn down toward the vulva; then taking in hand a Wiley-Sims' dilator, I dip its blades in pure carbolic acid, and having shaken off any excess of acid, I introduce them into the cervical canal, and dilate sufficiently to readily admit of the introduction of the Sims' dilator, which I prefer at this stage for the reason that the dilatation can by its use be regulated more easily as to duration, and its extent more easily determined. The advantage of the Wiley-Sims' dilator consists in its more ready introduction into a distorted canal in consequence of its small points and curved direction.

I usually consume from ten minutes to a half-hour in accomplishing the divulsion, the degree of resistance determining largely the length of time. The dilator removed, should there exist endo-cervicitis, as is usually the case, with a Sims' instrument, I thoroughly curette the mucous lining of the cervix, then with the bichloride solution I again cleanse the genital tract, and taking from a solution of pure carbolic acid one of Wiley's hard rubber plugs, of suitable length and size, I pass it into the dilated passage, and secure its retention by means of antiseptic tampons.

Should no untoward symptom arise, this plug is left in for forty-eight hours, at the expiration of which time it is removed and the entire genital passage antiseptically cleansed and another similar plug introduced, the same antiseptic precautions being observed as previously, and this course is continued for one week. The plug is then left out for several days, after which it is re-introduced with the same precaution as before and worn for twenty-four hours, and so on till the approach of the second menstruation following the operation.

The use of the plug is intermitted during the menstrual flow, reference to which should determine the time of the operation. The patient during all the time that the plug is worn is confined to her bed, and most invariably assumes the dorsal position, it being the most comfortable. Her diet is light and simple during the first week. For the first two or three days after the operation the bowels are confined and the water drawn off; an opiate enema is administered should the occurence of pain require it, though the amount of pain complained of is usually inconsiderable.

Rationale: It is not difficult to understand the rationale of this procedure in the treatment of stricture of the cervix, whether it be congenital or acquired, for by it we tear asunder the circular muscular fibres of the cervix, we rupture them at various points, influenced by their varied attachments and relations; one set of muscles here, another there, and so on throughout their distribution, rather than at some fixed and definite line, as in the case of the incision. If the circular fibres of the cervix all acted from the same fixed point, there could not exist the objection to the practice of incision, that I entertain, and I believe very justly.

By incision injury is done to the longitudinal as well as the circular muscular fibres, by dilatation the integrity of the circular fibres is interrupted at various irregular points, whilst that of the longitudinal fibres being unaffected is exerted in shortening the cervix and increasing its transverse diameter. And practically, this is just what I have observed after divulging a conical, narrow and elongated cervix. It is not necessary to amputate any portion of such a cervix, as has been improperly taught—divulsion gives it normal shape and function.

The immediate agency of dilatation in the treatment of endo-cervicitis has already been sufficiently indicated, its mediate effect lies in removing the stricture or flexion, of which endo-cervicitis is the result.

In treating of the *modus operandi* of divulsion in curing flexions, I do not think it necessary or essential that I should enter into any extended consideration of the subject of flexions; suffice to say that I regard flexions or distortions as consequences of malnutrition of the uterus, occasioned by some infirmity or depravity of the general system, either uterine or extra-uterine, involving an embarrassment of the nervous or vascular supply of the uterus, or possibly implicating both the nervous and vascular elements.

As specially pointed out by Graily Hewitt, malnutrition of the uterus is manifested by undue softness of its walls, the impairment of the condition of the tissues results in a loss of that normal healthy rigidity of the walls of the uterus by virtue of which it preserves its shape and form amid the buffetings of surrounding organs. If, during the period of uterine ramollescence, the isthmus be fixed by utero-sacral cellulitis, a moderate excess of intra-abdominal pressure will occasion anti-flexion, or if there be fixation of the cervix by the bladder systole, with a position of the uterus favoring retroversion, excessive intra-abdominal pressure will produce retroflexion. Fixation of the cervix, as indicated by D. Berry Hart, is almost an essential in the dynamics of flexions.

The uterus having once lost its physiological form, flexion having occurred, is unable by any inherent capacity to effect its own restitution, and when in the course of events there comes a repair of the vascular and trophic lesions, that lead to the undue softness and pliability of its walls, and in consequence there is substituted their physiological firmness, condensation and tonicity throughout, except in certain parts immediately engaged in the flexion; then there will be appreciated the anomalous fact that the conditions of health entail the perpetuation of a consequence of disease.

The indications then for the cure of an established flexion will be found to consist in the reëstablishment of the physiological state of the uterine walls throughout, and this can be accomplished more readily, certainly and effectually by the treatment that I have indicated, than by any other means that I know of. By means of it we break up all adhesions, we straighten the canal, we change the muscular tissues at the point of flexion from an abnormal to a normal state; and we establish the circulation

upon a new and uninterrupted basis. By it we span that breach of nutrition that leads to the flexion, with its chain of pathological consequences, and we release our patient from her protean ills.

Grand and Page Avenues.

NOTES ON HOSPITAL CASES.

VESICAL CALCULUS; MEDIAN LITHOTOMY — RECOVERY. RHINOPLASTY; INDIAN METHOD.

Read before the Medical Society of the District of Columbia, June 1, 1887.

BY JOHN B. HAMILTON, M.D.,

SUPERVISING SURGEON-GENERAL OF THE U. S. MARINE HOSPITAL SERVICE. PROFESSOR OF SURGERY, GEORGETOWN UNIVERSITY.

I regret extremely that my time has been too much occupied to comply with the request of the Corresponding Secretary for a systematic paper, but it occurred to me that the notes of some rather unusual hospital cases might prove interesting to the members of the Society. They are therefore presented without alteration from the case notes.

Vesical Calculus, Median Lithotomy—Recovery—Case 1.—M. L. Underwood, sailor, æt. 22, admitted to Marine Ward, Providence Hospital, Washington, suffering from an impacted calculus of the urethra, June 10, 1886. He was placed on the operating-table and I found the calculus in the urethra anterior to the bulb. An attempt was made to seize the stone by means of the alligator forceps, but it slipped back into the bladder. No further operation was attempted at that time, and in a day or two he passed the stone during micturition. He was discharged June 25, 1886. He was again admitted January 13, 1887, suffering from the usual symptoms of stone in the bladder, pain more or less constant in the penis, and occasionally a pinkish tinge to the urine. There was no hæmorrhage. His general condition was excellent, but the vesical pain was severe. On passing a sound the stone was discovered, but not very distinct click, and sometimes could not be felt.

Median lithotomy was performed by myself in the presence of the class, Jan. 30, 1887, and the stone found encysted in the anterior wall of the bladder. There was much difficulty in its removal, which was only effected by directing a strong water current against the wall of the bladder. He recovered without difficulty, and the patient was discharged February 25, 1887. The stone is one of the common uric acid calculi.

Case 2.—Henry Heil, native of Germany, æt. 18, admitted to Providence Hospital May 3, 1887. He was of strumous diathesis and his urine contained 10 per cent. of albumen. On sounding I discovered a stone just behind the prostate. He was suffering greatly and was in bad condition. Median lithotomy was performed by myself May 8, and an adherent stone found. It was dislodged with the scoop, and extracted in the usual manner. The bladder was washed out through the wound for two mornings with a weak solution of bichloride of mercury. Part of the urine passed by the natural channels on the fourth day, and on the fifth day the wound was closed. The patient was discharged recovered May 23, fifteen days after the operation. The specimen is a very beautiful one, of the oxalate of lime variety.

Rhinoplasty — Indian Method. — John Sheehan, Irishman, æt. 35, lost his nose in Ireland in 1861. He had small-pox and subsequently syphilis, but the ulcer of the nose following the small-pox was slow in healing, and the nasal cartilage was entirely destroyed. There were two minute openings to represent the nostrils, but the face had flattened, and only the bridge of the nose was left. The patient was admitted to Providence Hospital, and rhinoplasty performed by me January 3, 1886. The operation was done by the Indian method, the flap being raised from the frontal bone, including the periosteum. The new nose united by first intention, and a little more than a year after the operation I had his photograph taken, which shows his present appearance, after ample time has elapsed for the usual shrinkage.

While this man cannot be said to be in any degree handsome, yet the operation greatly improved him. He was frightfully disfigured by the small-pox, and the deformity of the lip is due to that cause, and however much one may cavil at his personal appearance, it must be conceded that a happier man never left the hospital. As will be seen by the photograph, the wound in the forehead healed without leaving a very prominent scar.

NOTE.—Dr. Martiny, of Lyons, France, has recently brought to the attention of the profession a new form of artificial nose (porcelain), by which the spectacle frame is dispensed with; a maxillary plate is required, which holds the nose in place by means of an upright rod. (*Trans. Ninth International Medical Congress*, 1887.)

MEDICAL PROGRESS.

SURGICAL TUBERCULOSIS.—VOLKMANN concludes his paper on surgical tuberculosis (See preceding numbers of THE JOURNAL) with some *general considerations* on the subject.

36. The tuberculous character of an affection is not to be doubted when inoculation gives positive results, when the tubercle bacillus is demonstrated, and when the anatomical examination shows the well-known structural changes in the diseased tissues. All three conditions are present in the affections described above. On the other side, however, it is as yet not proved that tuberculous tissue must *always* present the follicular contraction.

37. The spread of tuberculosis takes place through different channels and in very different ways:

a. The original focus grows.

b. By the invasion of the tuberculous virus (bacilli) into the lymphatic vessels from the original focus. This probably extremely frequent, or almost regular occurrence does not, as a rule, lead to generalization, because the lymph glands not only retain specific pathogenic germs, but in many cases they evidently destroy them. The significance of the lymph glands as protective apparatus and filters in local infectious processes is not yet sufficiently appreciated. Generalization is, therefore, still very far off, even when the lymph gland becomes tuberculously infected and gravely diseased, as the virus, in case it should leave it and go further, will be retained in glands situated higher up. Generalization takes place only when the last lymph gland between the diseased part and the blood current is infected, or the thoracic duct itself becomes diseased.

c. By the penetration of the tuberculous poison into the serous sac from a neighboring tuberculous focus, and that happens either by the extension of this focus to the internal wall of the sac, or by the invasion by products of suppuration and softening, that contain bacilli. The farther spread then takes place in part by the fluid (synovial, exudation, etc.) in the sac, and partly by the displacement of the sac-walls by the functional movements of adjacent structures. The danger here is especially on account of the size and importance of the serous sac, its lymphatic connections, and further, on whether the sac be soon surrounded by a layer of granulations, that acts as an impossible barrier (though perhaps this has already been done before the introduction of the poison).

d. By the tuberculous poison being carried in in the same way, or by the products of suppuration and breaking-down in canals and cavities lined with mucous membrane, in which the poison either stagnates, or has to pass out of the organism by roundabout paths, in which the mucous membrane is infected by contact, and new miliary eruption takes place. The most unfavorable case is, of course, the lungs canalized by the bronchi, in which the virus sets up new foci not only in the bronchi and their immediate surroundings, but the larynx also becomes infected, and, as the sputum is swallowed, the intestines are also infected.

e. By the penetration of virus from a neighboring focus into a non-thrombotic, usually enlarged vessel, especially a vein, or into a lymph tract leading directly into the circulation, so that generalization, acute general miliary tuberculosis, follows. Tuberculous disease of a vein-wall from an adjoining focus is to be regarded as the most common cause of this general miliary tuberculosis.

When we consider these possibilities we are immediately struck with the fact that tuberculous affections of the bones, the skin, the cellular tissue, the joints, and of the lymph glands are much less dangerous than those of the respiratory organs or of the intestinal tract. Fistula ani is, thus, unfavorably situated, since the infectious material can be best quickly carried outwards. So far as the danger is concerned, tuberculosis of the urinary organs is no more favorably situated than that of the lungs and intestines. Tuberculosis of the testicles can be successfully treated by operation so long as the cord is not diseased.

38. The *susceptibility to the tuberculous virus* is in man restricted to certain individuals, and in these to certain times, and to certain organs and tissues.

39. This susceptibility is generally received, in the forms of disease with which the surgeon has to do, by hereditary infection. But the clinical material of hospitals and clinics is less valuable for statistical purposes here, because the patients can usually give but little information in regard to their immediate relatives or in regard to more remote blood-relations. The experienced old family physician will, I believe, always declare that fungous inflammations of joints, caries, tuberculous tumors of lymph glands, and the like, do not occur, as a rule, in healthy families.—*Langenbeck's Archiv*, Bd. 33, Hft. 1.

(To be continued.)

SCRAPING IN SUBCUTANEOUS ULCERATION.—IN an article on "Scraping in Surgery," MR. T. PRIDGIN TEALE, of Leeds, says: It is only in recent years that surgeons have recognized how great a power they have acquired over indolent unhealing surfaces by the introduction of the scraper. We are mainly indebted to Volkmann, who, in the "spoon" called by his name, has put into our hands an instrument by which indolent granulations, the lining of sinuses and abscesses, unhealthy ulcerating surfaces, lupoid ulcers, and even malignant growths, can be roughly rasped away, leaving a sound surface well supplied with blood-vessels, and disposed to fall into rapid healing. To the out-patient departments of hospitals this new power should be an inestimable boon. Cases of strumous sores and sinuses, and ulcerated legs, that reappeared week after week, and month after month, can now, by the expenditure of two or three months in hospital, be turned out healed, or so far advanced in healing that a week or two of home care will complete the cure. Even ophthalmic surgeons are falling under the spell of this new power, and are learning to compress, within a few days, the treatment of cases that often dragged on a

weary course of attendance for months. Such are tinea tarsi, ulcers of the cornea and granular lids, eczematous ulceration of nostrils, lips and eyelids.

Subcutaneous Ulceration.—My earliest experiences in scraping were in those remarkable cases of extensive subcutaneous ulceration that show almost an incapacity to heal, and that, from their superficial likeness to the sores and sinuses leading to dead bone, I used to speak of as "necrosis of fascia," acknowledging, at the same time, that the name was indefensible. In such cases we find large sores with sinuses leading to extensive cavities between the cutaneous tissues and the fascia covering the muscles, lined with granulations and more or less of half sloughy areolar tissue. These underminings are often very extensive, and involve, at times, half or two-thirds of the subcutaneous area of the thigh or leg, the lower extremity having been, in my experience, the most frequent seat of this kind of trouble. Formerly we should have said that such a surface could not heal because the patient was strumous or of weak constitution. Now we can almost guarantee that all, however extensive, or of however long standing, shall be healed in a very few weeks.

The worst case of the kind that ever came under my charge was that of a girl about 18, whose left leg and thigh were covered with sores, from which sinuses led to undermined patches of skin, so extensive that in consequence the leg was rigidly fixed at an acute angle with the thigh, and she appeared to be a hopeless cripple—aged and worn out in appearance, and such as one might have condemned as hopelessly strumous. The course of treatment in such a case, spread over two or three operations, would be as follows: All visible granulations are roughly scraped off a series of sores. The cavities and sinuses are then in like manner stripped by scraping off their granular, ulcerative, or sloughy lining; and these undermining cavities are provided with effective drainage by incisions, at the extremity of every pouch or pocket, perhaps an inch and a half in length, and T-shaped or semicircular, as a security against premature healing. By these incisions it is provided that no subsequent effusion of blood or serum can possibly collect and lodge. All fluid must ooze out and escape, and the walls must fall into contact, and in the main adhere by first intention. The cavities are then well syringed by carbolic acid solution (1 in 60), and generally are lined by a thinly spread coating of iodoform. The whole is packed up with an abundant padding of salicylic silk or absorbent cotton-wool charged with with an antiseptic drug. Occasionally it is well to insert a drainage-tube from point to point. As there is at first considerable sero-sanguineous oozing, it is wise to change the dressing in about twenty-four hours, dressing the new surfaces freely with iodoform, and covering again with a large absorbent pad, which ought not to need renewal for several days. In a fortnight all but the drainage points are, as a rule, healed. The girl in question was, in a few weeks, healed of her sores, was thriving in appearance, and actually recovered full use and movement of her leg without any aid whatever from passive motion or division of tendon.—*Liverpool Medico-Chirurgical Journal*, January, 1887.

PYRIDIN IN ASTHMA.—In the course of former experiments RENZI observed that besides lessening the number of respirations, pyridin also increased the energy of the heart's systole. He therefore tested it in severe cases of heart disease, two of aortic insufficiency, one case of pericarditis, one of parenchymatous nephritis with weakened heart, and one case of mitral stenosis.

He first gave the pyridin in doses of from 6 to 10 drops, diluted with two or three drachms of water, and gradually increased the dose to 25 drops. In the cases of nephritis and mitral stenosis there was no improvement, but in the others there was a strengthening of the systolic impulse, and the number of beats was lessened. The blood-pressure was increased. A systolic action was allayed more readily by pyridin than by digitalis, and it has no cumulative effects. Angina pectoris, that often complicates such cases, was more benefited by pyridin than by anything else.—*Centralbl. für klinische Medicin*, No. 46, 1887.

TREATMENT OF TAPEWORM.—DR. K. BETTELHEIM recommends the following mixture, made into pills:

Ext. filicis maris aeth.	10 grams.
Ext. pumicæ granati	10 "
Pulv. jalap.	3 "

℞. Make 70 pills; coat with keratin.

From 15 to 20 of these are to be given on the day of fasting, which is preceded by purgation, and the remainder of the pills are given on the following day, in two or three hours. When necessary, this treatment is followed by a purge. The object of the keratin coating is to prevent the solution of the pills until they pass into the intestines. In this way nausea, vomiting, and other discomforts and annoyances so often associated with the taking of vermifuges, are avoided.—*Centralbl. für klin. Med.*, No. 46, 1887.

COCA EXTRACT IN PAINFUL AFFECTIONS OF THE STOMACH.—In the last two years and a half D'ARDENNE has treated many cases of painful affections of the stomach with coca extract, for the purpose of relieving the pain. In the cases associated with structural lesions of the stomach-walls the relief was of short duration and incomplete, but in the purely functional cases the pain was always caused to disappear, however severe the attack, and though the usual remedies had been employed in vain. The dose used was 2 grains of the extract, every two hours.—*Revue Gén. de Clinique et de Therapeutique*, Oct. 6, 1887.

CHLORAL HYDRATE IN RABIES.—BROWN-SÉQUARD reports a series of experiments on rabbits and birds, in which he produced a kind of rabies by injecting oil of tansey. This rabies he was able to control by the vapor and subcutaneous injections of chloral. Brown-Séquard thinks that, from analogy, chloral is a preventive of true rabies. He refers to his previous writings on this subject, and to cases in man in which he exemplified his theory.—*L'Union Médicale*, Nov. 5, 1887.

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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, DECEMBER 10, 1887.

THE HYGIENIC TREATMENT OF STRUMA.

DR. WILLIAM ALEXANDER, of Liverpool, records, in the *Liverpool Medico-Chirurgical Journal*, his experience in the treatment of struma at the Liverpool Workhouse Infirmary. At this hospital the so-called strumous ophthalmia, and strumous disease of the joints and glands constitute the staple diseases of the children patients.

For the treatment of strumous ophthalmia a country house was selected near the city, and a careful, competent and zealous nurse appointed; and to this place the children were sent as soon as the acute symptoms of ophthalmia had passed away. Here the local treatment of the eyes was continued, being aided by the fresh air, plenty of exercise, and more wholesome surroundings. The treatment seems to have been successful, though the author's language is somewhat obscure: "Since that time only a few cases of ophthalmia percolate the Workhouse Infirmary, to be finally cured at Maghull (the place of the country house)." But he further says that no eyes are now lost, and that not many children exhibit those patchy eyes that were at one time an almost certain result of residence in workhouses. Dr Alexander concludes that "a thorough cure of strumous ophthalmia by country air is the only remedy worth considering in chronic cases. The part of the country to which the child should be sent is not a matter of any great importance, provided the place is healthy and not too cold."

In regard to surgical treatment of strumous glands of the neck, Dr. Alexander looks upon this with more favor as his experience grows, especially taken in connection with the medicinal and hygienic treatment. "The most favorable case for operation is when a single gland inflames and is about to suppurate. By a small clean incision the capsule of the gland is exposed, the capsule cleared, and the whole gland removed entire. The incision is accurately closed, the hole whence the gland was taken is drained, and a scarcely perceptible scar takes the place of a sinus that would under expectant treatment have kept open for months, leaving a puckered cicatrix at the end of that time. Any enlarged movable glands are also removed at the time of operation." When the capsule of the gland is so thinned or adherent to surrounding structures that it cannot be removed entire without a formidable operation, it is opened by the usual small incision, the pus evacuated, and the capsule carefully dissected out. The cavity is then dusted with iodoform, provision made for drainage, and the wound carefully closed. To attack the very bad cases of scrofulous glands of the neck, the surgeon must, of course, be very certain of his anatomical knowledge of the neck, so as to avoid important structures in opening the sinuses that generally lead down to cavities filled with strumous débris. Dr. Alexander uses the finger as a director and a narrow gouge as an excavator; the cavity is cleared out and explored, especially as to any communications existing between it and other sinuses. If such communications exist the sinuous tracts are well cleared out, opened up, and filled with carbolized-oiled lint, iodoform gauze, or some other antiseptic material. If irritation and inflammation are produced by this procedure a warm linseed poultice gives great relief, which should be removed when the inflammatory symptoms have subsided, usually in twenty-four or forty-eight hours, and the disinfecting treatment be resumed until the cavity heals from the bottom. Recurring glandular enlargements and abscesses, near to or remote from the seat of operation, should be attacked in the same way, cleaned out and freely drained; all the sinuses and deposits of cheesy material must be completely eradicated.

Simple glandular swellings, indolent and firm, should never, in the opinion of Dr. Alexander, be attacked by the knife. However formidable they look, he says, they disappear very rapidly under the medicinal and hygienic treatment he describes. Internally he uses the syrup of the iodide of iron, and externally the linimentum potassii iodidi cum sapone. "Blistering by iodine paint, or the application of the tincture externally, seems to be harmful rather than beneficial. Many of these glandular swellings *arise* from the irritation of the throat or scalp or teeth,"

and in the treatment of them he would avoid all irritation. The neck should be kept comfortably warm by some soft clothing, or by cotton-wool. The liniment is rubbed in very gently, but effectually, before a fire, and the cotton-wool applied as soon as the inunction is done. A thin and anæmic patient of course needs cod-liver oil and good food; but if the patient be plump and fat, as is sometimes the case, the oil is not necessary, and the food should not be too oleaginous. Very stimulating diet should be avoided in all cases. "But the diet is a secondary consideration, and depends upon the extent to which the hygienic treatment can be carried out."

However well it may be built and appointed, a hospital is not the place for the hygienic treatment of struma. "A sedentary, lazy, well-fed life is the least productive of an active and efficient circulation of either blood or lymph. Patients with glandular swellings not requiring surgical treatment should move about as much as possible in the open air, and receive medicinal treatment at home rather than in a hospital. The hygienic treatment, to be of marked benefit, should last over two months, and more. While over-fatigue is to be avoided, the patient should take as much exercise in the open air as possible, the throat being well protected from wind and rain. While a low-lying country is not so well suited for these cases as a hilly one, and while the sea-coast is preferable to the inland, yet it must be said that the country, whatever it may be, is better than the city, and infinitely better than the wards of a hospital.

In the hygienic treatment of strumous joint disease time, next to situation, is the chief element of success. Surgeons that have read Dr. Alexander's Jacksonian prize essay on hip-disease will read with interest what he has to say of the hygienic treatment of strumous joints. He finds that a sanitarium that is suitable for strumous glands does not agree so well with cases of strumous joint disease, and he is inclined to look upon the difference rather as indirect and accidental than as attributable to purely climatic influences. Of course, locomotion being impaired in cases of strumous joints, a hilly or mountainous country is less suitable for them than is a flat country. When the joint disease is so far cured as not to seriously interfere with locomotion, the patient will do well almost anywhere in the country. When the patient is sent to the country from a hospital after a long and acute illness the change is, of course, very great, and is aptly compared to the cold morning plunge of a healthy person. He should be well protected, and at first the stay out in the open air should be limited. Such a patient should not be subjected to hospital discipline for form's sake.

TYPHOID FEVER AND DEFICIENT WATER SUPPLY.

During the last few years, many instances have been chronicled in both the medical and secular press, suggesting an important connection between the unusual prevalence of typhoid fever and very low water in the streams, wells or other sources of water supply. During the latter part of the past summer and autumn, in many parts of the Mississippi Valley, an extraordinary drouth has prevailed, not only drying up the smaller streams and wells, but reducing the water in the larger rivers to an extraordinarily low level; and coincidently come reports from many localities of the unusual prevalence of fevers, especially of a typhoid type, and in some of dysentery also. During the last few weeks, in Cincinnati, where the Ohio River has been lower than at any time for six or seven years past, the typhoid fever has become so decidedly epidemic as to attract the attention of all classes, and especially of the medical societies of that city. The disease is reported as not unusually severe, but the number of cases is so large as to cause the number of deaths reported to have reached forty per week.

While we do not doubt the importance of the coincidence of extreme low water and typhoid fever, etiologically, some facts have passed under our observation that suggest the importance of two other factors of importance beside the low water. One of these is the occurrence of a season of unusual high water, or flood, immediately preceding the season of extreme drouth; and the other is a marked deficiency in atmospheric currents or winds during the dry part of the season, as compared with the average of a series of years in the same localities. Our attention was attracted to these additional factors or circumstances during the summer and autumn of 1881, when there was an epidemic prevalence of typhoid fever in Chicago and its suburbs. During the eight months from April to December of 1881, there were reported to the Health Office 527 deaths from the fever, when the usual number for the same months for the two or three preceding years was less than 200 each year. In searching for the causes for so great a prevalence for that year, it was ascertained that an unusual flood had existed in the months of March and April, after which there had not been sufficient rainfall to fairly wet the dust of the streets until the end of the summer months, and the records of the Signal Service station showed an aggregate of several thousand miles less of atmospheric currents than in the corresponding part of the preceding years.

DEATH OF SIR WILLIAM MCARTHUR.—Sir William McArthur, Mayor of London in 1881, and who will be remembered by the visitors to the Seventh International Congress that attended the reception at the Mansion House, died suddenly on November 16, after hurrying to catch a train.

SPECIAL ARTICLE.

THE CONGRESS AT WASHINGTON.

For the purpose of giving our readers impartial opinions concerning the success of the Ninth International Medical Congress, recently held in Washington, we early copied the full and gratifying expressions of the London *Lancet* and the *British Medical Journal*, and in furtherance of the same object we now give the following from a good authority in Paris:[1]

"We did not wish to take any part in the controversy that arose in the columns of the principal medical journals of Paris, on the subject of the *success*, or *non-success*, of the recent Congress at Washington.

"Some were enthusiastic over the importance of the work, and at the kind reception given to the foreign learned men. Others found through the pen of their correspondents rather slight appreciation. Newspapers of *rapid information* registered in succession the pro and the contra.

"For every impartial mind, the accounts rendered of the sessions, which were sent to Europe through the obliging and disinterested care of the *Medical Record* of New York, bring perfectly to light the number and value of the daily communications and addresses in the general sessions. Besides, these works are impressed on one with a novelty and originality not generally met with in Congresses of this kind.

"As to all that is relative to the American customs, studied at the receptions in the Pension Hall and White House, one should have a little more indulgence for the large reunions of men, for without crossing the Atlantic, one could see the same actions, and analogous incidents (as at the shaking of hands with President Cleveland) being produced at the aristocratic Court of Vienna during the Congress of Hygiene, and, if it were permitted to recall the fact, at the ultra-democratic receptions at the City Hall in Paris. Therefore, away with the system of *two weights* and *two measures!*

"Besides, in a letter addressed to the *Medical Bulletin*, Dr. Landolt praises very much, and with right, the reception that the learned Frenchmen received from their colleagues in America, not those in the middle of the tumult of a Congress, but in their hospitals, in their laboratories, even at the threshold of their activity. . . . . The criticisms, modelled by a certain journalist in his "*Voyage of Study*," against Mr. Hamilton, cannot attach to the eminent Secretary-General of the Congress. All our private correspondence, even that written by our American colleagues, who for personal reasons, abstained from taking part in the organization and working of the Congress at Washington, are unanimous in acknowledging that he maintained himself with credit under all the circumstances connected with the arduous task that he had accepted.

"And we, that have the good fortune of knowing for a long time the intellectual activity, the exquisite politeness and presence of mind of our colleague of the French Society of Hygiene, are very happy over the impartial and generous appreciation of Dr. Landolt; and let us conclude with the hope of seeing next, the important scientific works of Dr. Hamilton rewarded with the title of *foreign corresponding member* of the Academy of Medicine of Paris."

[1] Journal d'Hygiène, Nov. 10, 1887.

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

Stated Meeting, June 1, 1887.

THE PRESIDENT, JOS. TABER JOHNSON, M.D., IN THE CHAIR.

DR. J. FORD THOMPSON reported a case of

DEATH FROM SHOCK DURING AMPUTATION.

He said that the unfortunate accident was the first of the kind that had ever happened in his practice, and while he was not proud of the termination, he would nevertheless report the case. The patient was a man who had sustained a compound comminuted fracture of the leg just below the knee, about four weeks previous to his first visit, which was yesterday. He did nothing at that visit, but called again this morning.

He then found that the fracture was entirely ununited and that the soft parts were in a very bad condition, the thigh being infiltrated with pus up to its junction with the body. He opened up some of the abscesses in the thigh and then went at once for his instruments in order to amputate, as no time was to be lost in performing an operation that would, in his opinion, give the man at least a small chance of life.

Having made everything ready he proceeded at once with the operation, Dr. Friederich administering the ether while Dr. Cutts assisted him, there being besides the son and a friend of the patient in the room during the whole proceeding.

Before beginning the operation Dr. Friederich had called his attention to the fact that the man was taking ether badly, but as he had been given a good dose of whiskey there seemed to be no particular danger, so he went on. With the intention of doing a modified Carden he made the anterior flap long and of skin, the apex of flap being over the middle of the patella. The posterior flap was made from skin and muscle, and the femur was sawn through about 1½ inch above the condyles.

At the first stick of the knife bloody pus gushed out from sinuses in every direction in the thigh. The tissues on all sides were extremely friable and came off in great shreds and sloughs in his fingers. Having performed the amputation he washed out the sinuses as well as possible, and stripped the femoral vessels, in their sheath, of the surrounding tissue. He then opened the sheath and ligated the artery, putting also an extra ligature about ¼ in. above the first. The vein was then tied. Upon removing the tourniquet there was no hæmorrhage from any source. Long drainage-tubes were then put into the sinuses in the thigh and he was about to put in the sutures, when his attention was called to the low condition of the man, who was pulseless at the wrist and gasping for breath. Having seen such conditions before he simply gave some whiskey hypodermatically, and proceeded at once to finish the operation. While completing this the limbs were kept elevated and artificial respiration was kept up—the ether having been withdrawn some minutes previously.

Having dressed the stump he turned his attention to the patient, who appeared to be sinking rapidly. More whiskey and some ether were injected, while artificial respiration and other appropriate expedients were tried. There was a revival of the respiration for a few minutes and the skin got warm, though the pulse never came back to the wrist. In the hope of getting him to vomit, and thus stimulate the heart, he passed a catheter well down into the œsophagus and injected about two ounces of brandy and water into the stomach. This did not succeed, however, and the patient went into collapse and died after having been worked on for over an hour. The heart ceased a short time before the respirations.

This is the first accident of the kind that he has ever had happen to him, and while in this case the man was in a wretched condition from the first, he had no reason to believe that a fatal termination would immediately follow the operation. The ether had been administered carefully and not much had been given.

DR. J. B. HAMILTON said that he knew something about the case just reported, and would supplement Dr. Thompson's statements. He had been called to see the man the night of his accident, about four weeks ago. He found a fracture just below the knee but he thought that it did not extend into the joint. Amputation was advised at once, but his people would not permit it, and besides there was so much shock that he was the more willing not to do it. The wound was then drawn as close as possible and the limb was swung in an apparatus. He saw him a few days later and found him weaker than at first and much emaciated, though there had been no chill nor anything to indicate septicæmia. He saw the patient a third time about two weeks ago, and at this visit he opened a sinus in the popliteal space and evacuated about a quart of pus. He told the attending physician that the man would probably die whether his leg was amputated or not. He heard nothing more of the case until Dr. Thompson reported it.

He thinks that Dr. Thompson's patient died of shock—a not uncommon complication in such cases. Three years ago a young sailor was admitted into the Providence Hospital with a compound fracture of the femur just above the knee-joint. The accident had happened six weeks previously and the man was in a very low state, so that amputation was not thought advisable. Suppuration of the wound was going on, so he was treated with small doses of the bichloride of mercury, and after a time he appeared to have recuperated some. Suppuration continuing, however, amputation was performed. Not much blood was lost, and just after the removal of the limb he noticed that there was not the natural oozing of the parts. The ether had been stopped. The patient was in a state of collapse, and died in spite of every effort to save him. Shock and pyæmia were probably the causes of death.

DR. J. B. HAMILTON gave the histories of

TWO CASES OF LITHOTOMY, WITH SPECIMENS; A CASE OF RHINOPLASTY, WITH PHOTOGRAPH.

(See p. 752.)

DR. J. FORD THOMPSON said that the subject of the best way for the removal of vesical calculi was being very much discussed at the present time. While his own favorite operation for small stones is the median perineal, he thought that the first stone exhibited by Dr. Hamilton, being small and soft, might better have been removed by lithotrity. (Dr. H. explained that the stone was encysted in the anterior wall of the bladder and could not have been reached by a lithotrite.) Dr. Thompson said that in that case, of course, his criticism did not hold good. We have four principal operations for removing a calculus. For his part, in the young, with a small hard stone, he prefers the median perineal incision. It is true that this is objectionable on account of the impotence which may follow it, yet the operation is so successful in regard to mortality that it is being largely done.

The great trouble with Bigelow's lithopaxy is that it is very difficult to completely evacuate the bladder after the crushing. Even Thompson's evacuator, which is better than Bigelow's, is not perfect, so he has himself adopted the practice of inserting a large-size tube, filling the bladder with water and then letting the pieces of stone escape with the return current. The operation is undoubtedly a valuable one, though it was said when supra-pubic lithotomy was introduced, that the days of lithotrity had passed.

After performing lithopaxy upon a man who had had albumen in the urine for years, and having, as he thought, completely emptied the bladder of fragments, he put in a searcher and struck a piece of stone. Being unable to reach it with the lithotrite, he did median lithotomy. Within 24 hours the man had the most intense pain in the right knee with much swelling. He opened the abscess and dressed it antiseptically, but the man died after a month, without, however, having had any bladder symptoms. The trouble was pyæmia, which came on in 24 hours after the operation.

At present von Dittle and Ultzman, of Vienna, teach that the supra-pubic lithotomy is the only scientific operation. It is certainly applicable when

there is a large stone, especially in children. In old cases with large stone the bladder is apt to be contracted and hence difficult to reach from above. This can in part be overcome by the water-bag in the rectum. In his opinion, while the supra-pubic operation has become a well recognized one, it will never entirely take the place of all other operations, each of which has its particular sphere.

Last week he saw a boy who had fallen and fractured the bridge of his nose seven years before. No doctor had attended him at the time. The nose was perfectly flat at the bridge, the vomer having been driven in and the sides crushed. He considers this a difficult case to operate upon, as, before doing anything in this situation, we must be sure that we can at least benefit the deformity. Plastic operations for the restoration of the nose are not, as a rule, very satisfactory when there has been much loss of tissue, though Billroth will remove the whole nose for epithelioma and make a very good substitute by the plastic operation.

Dr. Hamilton said that the results of the median lithotomy were certainly satisfactory so far as the immediate relief to the patient goes. Bigelow's operation is unsatisfactory in some ways and is not applicable to children with narrow urethræ, while the supra-pubic operation has had its rises and falls for many years. As far back as 1867 he saw a surgeon do this operation.

In removing the flap for the nose depicted he took up the periosteum with the skin, and when this flap was brought down the column was made from the periosteum. The nostrils were kept open with tubes, while the nose was moulded by the ordinary dough method.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, October 6, 1887.

The President, Thomas M. Drysdale, M.D., in the Chair.

(*Continued from page 725.*)

Dr. M. Price reported a case of

ADHERENT INTESTINES FROM PERITONITIS, SIMULATING FIBROID TUMOR.

Mary J., colored, æt. 17 years, received a kick in the belly from a horse, about eighteen months ago. She was confined to her bed for a number of weeks and was a confirmed invalid up to the time of operation, suffering great pain in the lower part of the abdomen, the region of the injury. She was unable to work or do anything towards her own maintenance. Upon examination a hard mass was found high up and to the right of the uterus. Owing to her condition and the repeated efforts for her relief, it was decided to open her and see if the offending cause could be removed. I opened her, June 17, 1887, Drs. C. Penrose and J. Price assisting, and Dr. Welsh present. The bowels were found completely matted together, with an ill-defined mass at the right side. Nothing was found that could be removed. The omentum could not be found. Dr. J. Price suggested the separation of all the old adhesions of the bowels, peritoneum and mesentery, which I at once proceeded to do. These adhesions involved the entire length of the small intestine; binding the folds of the mesentery and knuckles of intestine in one solid mass. The adhesions were of such strength that many of them had to be cut through with scissors. The scissors, hand and sponge were the instruments used in the separation of the adhesions. This method was followed until every knuckle of intestine and fold of peritoneum and omentum was separated. The bowel was almost completely occluded by the bands. Complete irrigation with distilled water at a temperature of 110° was used. After this operation was completed the indurated mass could not be found. She reacted well and was freely purged with Epsom salts. She made an uninterrupted recovery, and said she had less pain the day after operation than at any time after the kick. I have seen her frequently since the operation. She is perfectly well and able to be about her work. As a distinct surgical procedure I know of no similar case on record. I opened a man a year ago for great pain in the region of the gall-bladder, and tore open the adherent viscera from the abdominal wall so as to complete my examination, but finding nothing wrong, closed up the incision. The pain was cured! But this operation was not performed with the same object in view as in the first case. Dr. Duncan, in his book on "Diseases of Women," p. 49, gives a case in point. I remember a case diagnosed as a fibroid tumor of the uterus, a hard rounded mass as big as a child's head, above the brim of the pelvis, very tender and slightly fixing the uterus. The young lady died, and at the post-mortem examination it was found that there was no fibrous tumor at all. It was adhesive perimetritis, a pocket of coherent intestines, which formed a hard mass and had led to the deception of eminent and experienced gynecologists."

Dr. M. Price also reported a case of

SPINDLE-CELLED SARCOMA OF THE OVARY.

Mrs. M., æt. 44 years, married twenty years, sterile; always regular, had always enjoyed good health up to January 1, 1887, when she was greatly troubled with inability to hold her water and with constant pelvic pain, with a feeling of fulness and an entire suppression of the menstrual flow, which had been regular up to that date. The incontinence of urine was relieved about the middle of February by the escape of the tumor into the abdominal cavity. The tumor grew rapidly, and when it had reached some two inches above the umbilicus the patient thought she might be pregnant and sought advice as to her condition. Upon examination I found the uterus small, the left ovary and tube healthy and posterior to the tumor. The right ovary could not be found, but in its position the pedicle of the tumor could be mapped out. The removal of the tumor was advised. Operation June 11, 1887, with assistance of Drs. J. Price, Burns and Penrose. A spindle-celled sarcoma of the ovary, weighing 5 lbs., was removed. The

patient reacted well. On the evening of the second day there was a slight rise of temperature and quickening of the pulse. Fearing peritonitis, I ordered a tablespoonful of Epsom salts every two hours until the bowels were freely moved. Six doses were given. The next day the pains had disappeared and temperature was normal. She has made a perfect recovery.

DR. DRYSDALE remarked that the successful result of the operation in this case was a proof of its justifiability, but he thought that, generally speaking, it would be of doubtful advantage to perform abdominal section for the relief of the consequences of peritonitis, as adhesions would be likely to reform immediately after the operation.

DR. PRICE explained that the active movements excited by the Epsom salts prevented new adhesions from forming. He made some remarks on ovarian tumors and stated that, although seeming to be of fibroid character and called fibroid at time of removal, microscopic examination had, in his experience, uniformly shown them to be spindle-celled sarcomata.

DR. PARISH remarked that it is always allowable to break up inflammatory adhesions in abdominal operations. The new adhesions formed are not firm.

DR. H. A. KELLY, a year ago, had examined a small tumor, about the size of a pea, distinctly arising from the ovary, and found it to be a fibroid; it was quite hard. He had, three months ago, removed from a girl of 11 years a large sarcoma of the ovary. She recovered. The intestines might be bound together into a mass by plastic lymph, and if there was no unnatural position of any portion, no kinks nor strangulation, no symptoms would be developed. The patient would feel no pain and would be conscious of nothing wrong. In an operation all bands and local adhesions should be broken up, and kinks or knuckles should be liberated.

DR. J. PRICE said that trouble will sometimes follow breaking up of old adhesions in the removal of cystoma, local pain and alarming local and general symptoms. He thinks the matting together of the intestines resulting from general peritonitis a cause of death in some few cases, and could be averted by prompt surgical interference. He described a case which he had seen recently as consultant, and in which he advised immediate operation. The attending physician would not consent until he thought his patient dying from peritonitis. The abdomen was now opened and the pus and lymph removed by irrigation and sponging; all adhesions were freed, and the patient commenced to improve immediately, and is to-day a well woman. The operation was the only way in which her life could be saved. In his brother's case the intestines were freed by free dissection, pressure was applied afterwards to hold the intestines back in the loins and keep them immobilized. The hæmorrhage during these operations was very slight. Dr. J. Hoffman had in a recent operation in which Dr. Price assisted him, found fourteen inches of the large intestines adherent in an operation for the relief of an umbilical hernia, requiring a long and masterly dissection. If such adhesions are not liberated, the operation of dividing the stricture and simply liberating the strangulated portion may be a failure in saving life. Here again Mr. Tait, in his deep surgical wisdom, recognizes the importance of opening the abdomen for strangulated hernia in the median line, that inflammatory adhesions and strictures may be liberated in the most scientific manner. Adhesions in pelvic inflammations are very common, and in operations they should always be released. Hard bodies are frequently discovered in the tubes and ovaries. Their appearance suggests fibroid growths, but they are in reality sarcomatous. The round ligaments alone do not seem liable to disease.

DR. MONTGOMERY was very much interested in the subject of this paper. The method of first breaking up the adhesions and then preventing their reproduction by peristaltic motion excited by saline purgatives, is similar in principle to the treatment of anchylosis in joints; breaking up adhesions and passive motion subsequently. Doubtless all present can bear witness to the beneficial action of saline laxatives in dysentery and other inflammatory intestinal affections. He had recently assisted Dr. Warder in the removal of an abdominal growth. The diagnosis had been nterine fibroid, but when the abdomen was opened the tumor was found to be of ovarian origin. It was very large and hard. Dr. Daland had made an examination of it and reported it to be fibroid in character. There was considerable ascitic fluid.

DR. LONGAKER made some remarks on the clinical history of adhesions. Some months ago, the specimens from a case of obstruction of the bowels ending in death were shown by him at the Pathological Society. This was a case of encysted, retro-uterine hæmatocele, the appendages on both sides being involved in the mass of adhesions, from which there passed a band to the lower portion of the descending colon about nine inches above the sigmoid flexure, where it was so attached as to form an acute flexure. At this point the bowel was in a gangrenous state and the colon above was greatly distended, while the portion below the obstruction had a lumen just admitting the passage of the little finger. The patient manifested no symptom of difficulty until four or five days after labor, when some nausea and vomiting occurred. The points of interest are that while the autopsy demonstrated the feasibility of an operation, the symptoms were at no time sufficiently definite to warrant a diagnosis. The patient must have had the trouble a long time without its giving rise to any but vague and indefinite symptoms. As involution of the uterus took place this knuckle of bowel was slowly dragged down into the pelvis.

DR. M. PRICE, in closing, said the appearance of his first described patient was remarkable. The long-continued suffering from peritonitis had so wasted her that she looked as if she had been passed through a wringing machine; her chest and belly were flattened out. If no symptoms resulted from the adhesions there would be no call to operate for their relief. But in all cases the intestines have sharp bends and curves, and form knuckles which are caught under lymph bands which tie the intestines together and contract them, and sooner or later symptoms of obstruction must be developed. He

does not believe in antiseptic surgery as applied to the abdomen and the peritoneum. If he did believe in microbes, tadpoles and the other insects so much talked about, he would be afraid to operate, for their presence, if all that is said about them were true, would do more harm than the peritonitis and more than the operation would do good.

Dr. W. H. Kelly considered this a most important subject, and one on which we are greatly in need of enlightenment. His own experience had taught him several interesting facts in regard to peritoneal adhesions. Bands of adhesion or the adhesion of a small area of intestine in such a way as to make it liable to kink, doubling it sharply on itself, are exceedingly dangerous and should never be allowed to remain. But there is a class of adhesions by no means dangerous, not productive of symptoms, and which should not be interfered with. We must bear in mind that the adhesion of opposing serous surfaces is a conservative process, preventing the continuous pouring out of effusion, and in event of tuberculous peritonitis probably starving out the disease by taking away its pabulum. The least dangerous variety of adhesion is the general adhesion of the gut *in situ*. He operated two years ago on a case in which all the intestines adhered, looking like one great bag when the peritoneum was opened. It was a case of tubercular peritonitis tending to a cure in this way. I simply dried out the peritoneum and besprinkled it with iodoform to check secretion, and the patient, who has been constantly under my eye ever since, has had no trouble from her adhesions. Also those cases of adhesions of lesser intestines in the pelvis, in which they lie adherent in normal relative position, in full round curves without kink, do not, so far as I have been able to observe in a large number of cases, ever do harm.

(*To be concluded.*)

PHILADELPHIA COUNTY MEDICAL SOCIETY.

The President, J. Solis-Cohen, M.D., in the Chair.

Stated Meeting, November 9, 1887.

Dr. Solomon Solis-Cohen read a paper on

LAVAGE IN THE TREATMENT OF GASTRIC AFFECTIONS.

(See page 745).

Dr. J. Tyson said: I have had some experience with lavage, although I have not employed it in the last ten years. In one case of dilatation of the stomach it was used with a great deal of comfort to the patient. He learned to introduce the tube, would wash out his stomach, and enjoy a good meal afterward. He subsequently passed from under my observation, but I heard of his death, which was, I believe, due to the disease which had caused the dilatation—cancer of the pylorus. In a second case in which I employed it, the result was not so satisfactory, and it caused great discomfort.

Dr. W. Osler said: I should like to state my experience in the use of irrigation, as this is a measure in which I have been interested for several years. In the first place, there is serious objection made to the procedure by at least one-half of the patients, on account of the discomfort experienced in the introduction of the tube. The soft tube is sometimes very difficult to pass, and sometimes it is necessary to resort to the stiffer tube. Where the patient himself performs the operation, it is, of course, better that he should have the soft tube.

I am of the opinion that this measure has a much narrower field than the statements of the French and German writers would lead one to infer. I should not hesitate to predict that within a few years, when the fashion has subsided, this measure will be confined entirely to cases of obstinate gastric catarrh in which it is of inestimable service, and to cases of dilatation of the stomach, in which it is not only of service, but absolutely indispensable. We have no satisfactory treatment for dilatation of the stomach other than irrigation.

Dr. E. Martin said: During my term of service at the University Hospital, this method of treatment was introduced by Dr. William Pepper, but our experience was, as Dr. Osler has stated, the patients would not remain. The measure was tried in six or seven cases, and all but one left. The patient who remained experienced marked benefit; he gained in weight, and when he left the hospital six months later, was able to pass the tube himself. The difficulty which I have recently experienced in one case is, that the patient would vomit the tube. This I overcame by using a stiffer tube.

Dr. J. P. C. Griffith said: During the past year I have been much interested in lavage in the diagnosis of diseases of the stomach; the German medical papers having been full of the subject. We, in America are, however, unable to study the matter to any great extent, owing to the rebellion of patients to this method of examination. German patients appear to be more tractable, and Riegel reports that during the year 1885, he made over 1300 examinations of the gastric juice in 122 cases; and in 1886, tested 134 cases in a similar way. Every patient presenting evidences of disease of the stomach was submitted to lavage, and the gastric contents thus obtained were subjected to a chemical examination. Riegel's method is to administer to the patient an ordinary mixed meal, and, after about six hours—the stomach should be empty at the end of seven hours—to remove the gastric contents, if possible, undiluted by the employment of water, and to filter them. He then tests the filtrate in order to determine especially the presence or absence of hydrochloric acid, and the peptic strength. The tests are at once simple and very delicate. He employs a variety of these, but the ones which have proved most satisfactory to my hands, and with which I feel most familiar are the reactions with methyl-violet and Congo-red for hydrochloric acid; and Uffelmann's carbolated iron test, for lactic acid. In the presence of a small amount of free hydrochloric acid a dilute solution of methyl-violet will turn to a blue color, and Congo-red will also be

changed by the acid to a blue. The results of Riegel's experiments are very interesting, and have been fully confirmed by Korczinski and Jaworski, and by Sansoni. It has been found that in carcinoma of the stomach hydrochloric acid is almost invariably absent, and that the peptic strength of the gastric juice is wanting; so that the attempt to digest albumen artificially with the filtrate fails. In dilatation of the stomach there is always a large amount of lactic and butyric acids, though hydrochloric acid and pepsin are also present. In dilatation, therefore, the trouble is not due to lack of digestive power, but to stenosis or to want of muscular power. Gastric ulcer is almost always preceded and accompanied by a hyper-secretion of hydrochloric acid. In cases of ordinary dyspepsia there is not a diminution of the gastric juice, but usually a hypersecretion. Riegel claims, therefore, that it is bad therapy to put every case of dyspepsia on a routine treatment of hydrochloric acid and pepsin; and that the chemical examination of the gastric contents is a *sine qua non*. A case recently in the University Hospital illustrates the value of this aid to diagnosis. A man was admitted in an extremely anæmic and emaciated condition, and with subjective and objective symptoms of gastrectasia. The signs of this disappeared, however, when the diet was carefully regulated; but in spite of the apparent digestion and absorption of food, he became more anæmic and weaker. The diagnosis of carcinoma of the stomach was entertained, and it was thought that some induration could be detected in the pyloric region; but the contents of the stomach were removed with the tube, and the filtrate found to contain an abundant supply of free hydrochloric acid, and to digest albumen perfectly. On this ground carcinoma of the stomach was excluded. The man subsequently died, and cancer was found to be absent; the source of the induration being a thickened and somewhat stenosed pylorus, due to a duodenal ulcer.

There is at the present time another case in the hospital, where gastric ulcer has been suspected, but the examination of the contents of his stomach have shown that digestion is retarded, and that there is no reaction for hydrochloric acid with the methyl-violet test. Assuming that the German observers are correct, the presence of ulcer is excluded in this case.

THE PRESIDENT, DR. J. S. COHEN, said: I can personally speak of the value of lavage in the treatment of dilatation of the stomach and in carcinoma. For the past twelve years, at least, I have been in the habit of using this measure, from time to time, during my terms of service at the German Hospital. Following the example of Kussmaul, we have usually used a solution of the Carlsbad salt of the strength of the natural water. In cases of dyspepsia, we have more recently preferred to use copious draughts of hot water to wash the contents of the stomach into the bowel. In the introduction of the tube into the stomach, a great deal depends upon the skill and experience of the manipulator. We had for several years a male nurse at the hospital, who could introduce the tube much more readily, and with less repugnance on the part of the patient than I could, or could any of the residents. One patient, with carcinoma of the stomach, used this treatment continuously during a period which covered at least two of my annual terms of service, and his example was a great encouragement to others to submit to the treatment. I would suggest that the tube could probably be swallowed with greater ease, if its lower end were weighted with a ring of lead.

DR. COHEN said: My object in presenting this paper was to elicit discussion, rather than to present something new. My experience, as implied in the paper, has been that of Dr. Osler, that it is difficult to get patients to submit to this measure. If, however, the first three or four times can be bridged over, the relief afforded is so great that the patient will allow it to be continued as long as necessary. Although I have passed the tube on some dozens of cases, the number of patients that I have systematically treated in this way, has not been great—only eight in a period of two years. Still, the results obtained in these cases of obstinate gastric catarrh, after the failure of all medication and regulation of diet, have been so satisfactory in the relief of symptoms, and in the almost reëstablishment of the normal condition, that I am encouraged to continue the dose of the procedure. In dilatation of the stomach it is especially recommended, and is the only thing to be done.

It would seem that in cases of vomiting due to the presence of sarcinæ, washing out of the stomach, with the subsequent introduction of a sufficient quantity of some safe antiseptic solution, would be one of the best plans of treatment. The tube has also been used in cases of poisoning, where the stomach-pump was not at hand.

MEDICO-LEGAL SOCIETY OF CHICAGO.

Stated Meeting, October 1, 1887.

THE PRESIDENT, E. J. DOERING, M.D., IN THE CHAIR.

Dr. Frank Billings and Dr. Truman W. Brophy were elected acting members. The following were elected honorary members: Gen. John C. Black, Hon. Commissioner of Pensions, Washington, D. C.; N. S. Davis, M.D., LL.D., President Ninth International Medical Congress; Clark Bell, Esq., President New York Medico-Legal Society; and J. Adams Allen, M.D., LL.D., President Rush Medical College.

DR. D. A. K. STEELE read a paper on

THE MEDICO-LEGAL ASPECT OF CRIMINAL ABORTION.

He said that when he was requested to prepare a paper on criminal abortion for this Society he hesitated, because he felt that he could present nothing new. The whole field had been gone over again and again by abler minds and readier writers than himself; but old truths should be retold, old errors and present crimes must be exposed, and an earnest, honest effort made to stamp them out. He would limit himself to criminal abortion, saying nothing of

accidental or natural abortion. By criminal abortion, fœticide, he meant the interfering with the life of the fœtus from the moment of viability. He held that the act of impregnation instantaneously originates an absolutely independent life; that from the moment of the fusion of the male and female germs, vitality is established and essential components of a mature individual are represented, the development which subsequently elaborates all the structural details proceeding by the innate differentiation of the impregnated ovum. He enumerated the gradual development of the fœtus in proof of this assertion. Not agreeing with Aristotle that forty days are necessary to viability, nor with the law that a human embryo is not a human being until extracted from the body of the mother, he held that from the moment of impregnation the fœtus differs only in degree, but not in kind, from the infant and adult. It is a human being with an inalienable right to life, and its destruction is homicide. He was aware that by the Stoics it was considered that the soul was not united with the body until respiration took place, and that in England the common law considered that life did not begin until the child stirred in its mother's womb, and until recently they drew a distinction between abortion induced before or after quickening—the first being regarded as a felony, while the latter was a crime punishable by death. This distinction has been repealed, and now an attempt, even though no pregnancy exist, is regarded as a crime. The Moss law provides that if an abortion results fatally, whoever does the act or aids, assists or abets, shall be imprisoned in the penitentiary for not more than twenty years nor less than five years. If not fatally, not more than seven years nor less than one, or a fine of not exceeding $2,000. Practically the same law is enforced in this State.

The question of saving the life of the mother at the expense of the child was a question no one physician should determine upon. The evils of the question were further dwelt on at length and remedies suggested as to the further moral education of the people at large and the profession in particular in connection with this crime. It was suggested that the conviction of a few of the principals with their accessories would go far towards correcting this terrible evil.

Judge O. M. Horton said: I have been requested to present to you this evening the legal aspect of criminal abortion, and what constitutes it. This topic presents clearly one question showing the wisdom of the organization of this Society. In matters of medical jurisprudence especially, physicians and lawyers should stand side by side, working together for the common good. They may thus do much to aid each other and the public in ridding both professions of the quacks and shysters—the leprous excrescences that fasten themselves upon both professions. Is it too much to ask or expect that the members will give such faithful attention and devote such time to the interests of this Society as shall give it the position and influence with the public, and the members of both professions represented, as it deserves? The responsibility is upon you, the opportunity is at hand. For the purposes of this evening, abortion and miscarriage will be considered as synonymous. Indeed, they are substantially so under the statutes of Illinois.

At one time it was no offense to procure an abortion, if done with the woman's consent, unless the woman was "quick with child." If after that time, the child, so far as relates to the offense under consideration, was deemed to have a separate and independent existence, and its destruction was held to be highly criminal, but a misdemeanor only and not a felony. Our statute, however, has changed the former rule, and makes it a felony; the provision of our statute being as follows:

Abortion: Producing: 3. Whoever, by means of any instrument, medicine, drug, or other means whatsoever, causes any woman, pregnant with child, to abort or miscarry, or attempts to procure or produce an abortion or miscarriage, unless the same were done as necessary for the preservation of the mother's life, shall be imprisoned in the penitentiary not less than one year nor more than three years, or if the death of the mother results therefrom, the person producing or causing the abortion or miscarriage shall be guilty of murder. (R. S. 1845, p. 158, § 46. L. 1867, p. 89, §§ 1, 2, 3.)

It will be noticed that the distinction and provision of former times, that the woman must be "quick with child" is omitted. The offense is the same in the eye of the law of this State, without regard to the period of pregnancy. To cause "any woman pregnant with child" to abort or miscarry, is a felony. If the death of the mother is the result, it is murder—if not, it is a felony, punishable by imprisonment in the penitentiary.

The fact that the law of this State makes no allowance or distinction as to the period of gestation should be clearly understood by the medical profession. The law also fixes a salutary penalty against druggists and others selling any drug, etc., known or presumed to have the effect of producing an abortion, except upon prescription of some well-known and "respectable practicing physician." It may be well to explain a little further the law as to what constitutes murder in the class of cases now under discussion. The deceased must have been a human being, and an unborn child is not a human being within the meaning of the statute. "If, however, a child receives an injury while it is yet unborn, and it is afterwards born alive and then dies by reason of such injury, the person doing the injury, if it was wilful and intentional, is guilty of murder.

"So if a person intending to procure an abortion does an act which causes the child to be born alive before the natural time, and consequently less capable of living, whereby it dies after birth from this premature exposure to the external world, he is guilty of murder." Of course it will be understood, in all these cases, that the law does not apply when the act is necessary for the preservation of the mother's life.

I shall not attempt in this presence any discussion of the question—or rather proof of the fact—that from the moment of impregnation there is life, and

that the subsequent history of the fœtus is one merely "of development, its attachments merely for nutrition and shelter."

Allow me here to commend to your consideration a small volume, of about 200 pages, upon "Criminal Abortion, its Nature, its Evidence and its Law," by Dr. Horatio R. Storer. The collection of evidence and statistics showing the prevalence of this crime would astonish those who have not given especial attention to the matter, even members of the medical profession. I am indebted to this writer for some of the conclusions here presented. I would call attention, also, to the fact that our statute also makes makes it a penitentiary offense to advertise or cause to be advertised, or in any manner call attention to or recommend any drug, nostrum, or instrument to be used in the perpetration of this crime. The law is ample, Shall it be enforced and its violators brought to justice?

The changes in the law as indicated by the difference in our statutes at other times, are simply the formal legal expression of the changes in public opinion. And after all that has been, or may be said by way of criticism, in regard to adherence to precedents, you will find that the laws upon this, and all similar questions, arises to the same moral plane of right and wrong occupied by the people by whom, and for whose benefit and protection, it is enacted. It is not the production of abstract theorists. It is the essence of human judgment, the concrete of human experience.

The question then very naturally arises, if this be true, and with the alarming frequency of the violation of this law, why is the law so rarely enforced—its infraction so rarely punished? In answering this question, the fault or neglect cannot be attributed to any one cause, or any single class in the community. There are numerous reasons, among them are secrecy surrounding the act, the lack of moral conviction in the minds of many of the participants, the general absence of all fear of detection, the prevailing of a feeling of "false modesty," the number of persons practicing as physicians who will commit the crime, or contribute towards its commission, and the sacredness of the professional confidence of the regular physicians. Honorable practitioners owe it to themselves and to their brethren to drive from the public mind the too prevalent opinion that *money* will induce almost any physician to perpetrate a crime against the laws of God and man.

Of the mother, by consent, or by her own hand imbrued with her infant's blood; of the equally guilty father, who counsels it or allows the crime; of the wretches, who by their wholesale murders far out-Herod Burke or Hare; of the public sentiment which palliates, pardons, and would even praise this so common violation of all laws, human and divine, of all instinct, of all reason, all pity, all mercy, all love, we leave those to speak who can.

DR. SAWYER wished to correct Dr. Steele in regard to the frequency of criminal abortion. He quoted Cazeaux and La Chapelle as saying that abortions in Paris as were common as labors at term. He, himself, had never seen one-tenth the number of abortions hat he had of labors.

DR. HENROTIN said he had in former years many opportunities to investigate cases of this character. He had had the pleasure of bringing several of these criminals to justice, and had been instrumental in sending two of them to the penitentiary. The crime, he said, was a very common one. Several cases of physicians and others who had been guilty of the offense were mentioned and suggestions as to conviction.

DOMESTIC CORRESPONDENCE

LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Urethral Calculi—Multiple Calculi—Displaced Calculous Kidney.

At the November meeting of the New York County Medical Association some remarkable cases of stone were presented. The first was presented by Dr. Daniel Brown, who said that the patient, a man 61 years of age, came to him complaining of inability to pass his urine. The penis was unusually small, and finding that the meatus, which was of very narrow calibre, was occluded with some hard substance, Dr. Brown incised it and removed several calculi. After this he practiced gradual dilation of the urethra until a number 18 sound could be passed, and at no time during the process of dilatation was there any evidence presented of stones in the bladder. From this time the patient had no further trouble until the end of two years, when he again presented himself suffering from stoppage of urine. Calculi were once more found blocking up the urethra, and every day for a considerable period some were removed. On one occasion, in endeavoring to get into the bladder, his assistant was unfortunate enough to make a false passage. There was marked cystitis, and the patient gradually sank. After death the bladder was found to be full of calculi.

The question naturally arose, Was this a large stone which had spontaneously ruptured, or were there originally a number of small stones which formed in the kidney and afterwards received accretions in the bladder? The shape of the calculi seemed to indicate that the former was the correct hypothesis, and this was also rendered the more probable by the complete absence of renal colic during the history of the case.

The bladder of the patient, that has not as yet been opened, was now presented by Dr. J. W. S. Gouley, to whom Dr. Brown had transferred it for preservation in the museum of the New York State Medical Association. Remarking that to the touch the organ felt like a bag filled with coarse gravel, he laid open its cavity with the knife; when it was found that the walls were somewhat thickened, though not to such an extent as might have been expected under the circumstances. The calculi which it contained reached to the upper fundus, and on emptying them out he found that there had been a spontaneous fracture, not of a single large stone, but of a number of smallish stones, the greater part

of which had been too large to be expelled spontaneously. There was, however, no urethro-vesical obstruction, such as would have been caused by an enlarged prostate, and there was, therefore, no reason why some of them should not have been discharged in this way. The mucous membrane was found to be more or less columnar, and in it were a number of little pouches. One of these was large enough to admit the end of the little finger, and at this point there was some ulceration of the membane.

This, then, Dr. Gouley said, was a case of multiple calculi, and it was one of very puzzling character. Many explanations had been offered for the spontaneous fragmentation of large stones in the bladder, and there was, indeed, scarcely an authority in this department of surgery who had not brought one forward. But in the present instance not one of them was applicable, and he was quite at a loss how to account for the condition of affairs met with. Taking up a number of the pieces, he said that he held in his hand no less than eleven distinct nuclei, and that there was not a single entire stone in the mass found in the bladder, which would weigh over a quarter of a pound. The extraordinary feature of the case was the spontaneous rupture of all these stones.

Dr. J. R. Mac Gregor then related a remarkable case occurring in his practice some years ago. The patient, was a lady of 63, who came to him stating that she had had a great deal of pain for a long time in the hypogastric region, and bringing with her a box containing more than 300 calculi that she said she had voided from time to time. A vaginal examination revealed the fact that a number of calculi could be felt with the fingers, apparently in the bladder. A further examination was made at her own house; when gradual dilatation of the urethra was accomplished with sounds, and a narrow-bladed pair of forceps introduced into the bladder. Nothing like a stone, however, could be detected, and this attempt gave rise to so much pain and distress that the patient declined any further interference for the time being.

She then went out of town for the summer, but by the time that she returned her sufferings had increased to such an extent that she was willing to submit to any procedure that promised relief. The late Dr. Studley was called in consultation, and ether being administered, the urethra was gradually dilated until the finger could be introduced into the bladder. No calculi were found loose in the latter, but plenty of them could be felt covered, apparently, with some sort of a membrane, and it was concluded that the calculi were encysted. With the finger nail and a pointed instrument the supposed membrane was ruptured, and two calculi, each about the size of a grain of corn, were extracted. The others that were felt receded beyond reach when the effort was made to get at them. The discovery was then made that there was also a stone present of very large dimensions; but it was deemed imprudent to attempt anything further on this occasion. The patient had taken ether very badly, so that at one time it was necessary to resort to artificial respiration and hypodermic injections of brandy; and she died in about forty-eight hours.

At the autopsy there was found in the pelvis, an organ resembling the uterus at the fifth month of pregnancy; and on section there was discovered in it a stone of enormous size, together with a very large number of small ones, This organ proved to be the left kidney, that had become displaced and occupied the ordinary situation of the bladder. It was flattened out like a large sac, and in it were found more than 520 calculi; while some additional ones were lost in the abdominal cavity. The large stone that Dr. MacGregor presented was somewhat pear-shaped, and weighed no less than 51 ounces. It was 6⅜ inches long, and measured 16⅝ inches in its larger circumference, and 12½ inches in its smaller circumference. At each end there was an area where the surface had become polished from contact with the small stones. A section of the mass has never been made, but it is supposed to consist mainly of uric acid; although the exterior is thoroughly encrusted with earthy phosphates. Dr. Mac Gregor then proceeded to refer to some of the cases of unusually large stone reported by various authors, and in conclusion said that with the exception of one that Lister came across in a journey to Paris, the stone now exhibited was the second largest on record.

Dr. Alfred L. Carroll having said that he could not see how the phosphatic coating of the stone could be accounted for unless there had been an opening between the kidney and the neck of the bladder, Dr. Gouley stated that he had become convinced from repeated observation that phosphatic deposits frequently occurred in the pelvis of the kidney, and that they might take place in any part of the urinary apparatus. In herbivorous animals it was a well-known fact that the kind of stone which ordinarily originated in the kidney was the phosphate of lime calculus. P. B. P.

DISINFECTION OF GYNECOLOGICAL INSTRUMENTS.

Dear Sir:—The article of Dr. French on the "Chief Source of Danger in the Use of the Uterine Sound," in the August 27th issue of THE JOURNAL, is timely and valuable; yet I cannot let the occasion pass without criticising one point. Fritsch is quoted as saying: "Always before introducing the uterine sound, dip it into a 5 per cent. solution of carbolic acid, even though properly cleaned directly after its previous use."

I do not claim that the single dipping of a sound into a 5 per cent. solution of carbolic acid may not prevent septic infection, but from my observation of the manner in which the common gynecological outfit is kept, I can safely assert that either a grinding or polishing would be necessary to remove the incrusted dirt from many sounds. As a matter of fact, the method of Fritsch is entirely inefficient as an antiseptic measure. The best way to disinfect all gynecological instruments not tempered for cutting purposes, (curettes, placental forceps, sounds, etc.,) is to pass them several times through the flame of a spirit lamp, and then place them in a so-

lution of carbolized water. From this solution they should be taken and used, without coming in contact with anything not rendered thoroughly aseptic. This efficient and *absolutely reliable* means may also be applied to the instrument used for exploring the bladder.

The remarks of Dr. French apply with added force to the use of tents of whatever variety. Indeed, the dangers from this source have become so great, that many practitioners have discarded tents altogether; though theoretically they should be much less dangerous than divulsion or incision. For the past two years I have been specially studying the uterine reflexes, and have had occasion to use the sponge-tent frequently. I have thus far escaped the slightest inflammatory reaction or septic infection from their use. I am satisfied that the only danger from the use of tents is their liability to convey septic matter. They are of a porous material, usually kept loose in a box, or in the physician's obstetric bag, or on his table in the neighborhood of decaying urine, pathological specimens, etc. It is surprising that septic infection is not more frequent.

My method is to place the tent in a small vial, just large enough to contain it, the neck is filled with absorbent cotton and a cork fitted. The bottle is then placed in an ordinary bake-oven for one or two days. The heat is, of course, sufficient to destroy all germs, and as they cannot obtain ingress, you have a thoroughly aseptic tent, which may be used at any time. When introducing them the vagina should first be thoroughly irrigated with a corrosive sublimate solution, and the neck of the uterus wiped out with carbolized glycerin. The cork is then removed, and the tent is grasped in a pair of sterilized dressing forceps and introduced. A cotton tampon saturated with carbolized glycerin completes a procedure which, if efficiently carried out, will, I am sure, make infection from the use of the sponge-tent a thing of the past.

Very truly yours,

HAROLD N. MOYER, M.D.

434 W. Adams St., Chicago, Oct. 1, 1887.

CASE OF HYDATIDIFORM MOLE.

Dear Sir:—In the issue of THE JOURNAL of November 26, Dr. Thos. C. Smith, of Washington, D. C., reports two cases of "Hydatidiform Mole." As I also met with a case a short time since, and in many respects similar to the last of his cases, I beg to submit it to the profession.

Mrs. W., æt. 41, white, has had six children. *Previous history.*—Several years ago, she tells me her old family physician, now deceased, treated her for "falling of the womb" by introducing a support, but since he died she has used nothing, and has had no trouble until recently, when she called me in, complaining of pains in the back and side, profuse leucorrhœa, and a general feeling of fatigue. I advised an examination and an introduction of the proper support, but for various reasons it was postponed. She incidentally mentioned that her monthlys had not then appeared for two months. Pregnancy was at once suspected, but she persistently denied that such was the case, saying that in her other pregnancy she never felt as she did then. I then advanced the idea that the "change of life" was coming on her, but was still suspicious of pregnancy.

About a month afterwards I was hastily summoned to her bedside, the messenger saying she was "flooding." On my way there I learned that she had done an unusually large day's work that day, and while she was at the supper table she had suddenly begun to bleed. On arrival at the house I found her pale, weak from the loss of blood, and all with the symptoms of previous profuse hæmorrhage. An examination was made and revealed an enlarged womb, of about three months' pregnancy, and very painful to the touch, os dilated so that my index finger passed in with some difficulty. Hæmorrhage profuse. Of course a miscarriage was at once diagnosticated, and the proper treatment of rest in the recumbent posture, opiates and ergot were given, and the patient left for the night. The next morning she was still bleeding but not so freely; os and womb in about the same condition. The same treatment was continued, and a tampon of cotton applied, and retained for fifteen hours, when it was removed, and I found a handful of hydatidiform bodies in the vagina, and a large piece of what looked to me like placenta was removed from the womb, after which she ceased bleeding and made a rapid recovery. She still claims that there was nothing wrong with her, and that she was not *enciente*.

Very Respectfully,

J. S. HACKNEY, M.D.

Uniontown, Pa., Dec. 1, 1887.

EHRLICH'S TYPHOID-URINE TEST.

Dear Sir:—In No. 2, vol ix, p. 53, of THE JOURNAL, you print what is meant to be the formula for Ehrlich's test of typhoid urine, of which I spoke in May last, before the Association of American Physicians, in Washington. In your communication, as also in those of many other journals, there was a serious typographical error, that ought to be corrected in the interest of Professor Ehrlich, but still more so in that of many of your readers. The formula is as follows:

1. Sodium nitrite, 1 part; aq. destill., 200 parts (is liable to be decomposed after from four to ten days).

2. Acid sulfanilic, 5 parts; ac. hydrochlor. conc. pur., 50 parts (not 5); aq. destill., 1,000 parts (not 100).

Of 1 take 1.2 parts, of 2 take 50 parts, to form 3.

Mix 3 and urine in about equal quantities, and add slowly aq. ammon. towards neutralization. The deep maroon color will soon appear. I advise to test normal urine first, or alongside the suspected or morbid specimen. Very respectfully,

A. JACOBI, M.D.

110 W. Thirty-fourth St., New York.

NECROLOGY.

R. W. HOOPER, M.D.

Robert William Hooper, M.D., of Cambridge, Mass., was born in Marbletown, Mass., Oct. 25, 1810, died at his residence April 13, 1885. He was the son of John and Eunice Hooper. He graduated in letters at Harvard College in 1830, and in medicine in 1836. After having studied some years in Europe, opened an office for practice in Boston. In 1837 he married Ellen Sturgis, daughter of Wm. Sturgis, merchant of Boston. His wife bore him three children and died Nov. 3, 1848. The children survive their father. Dr. Hooper was for many years one of the surgeons of the Massachusetts Charitable Eye and Ear Infirmary. For thirty years he was one of the trustees of the Boston Athenæum. And for nearly the same time he was connected with the State Hospital for the Insane, at Worcester, of which he was a trustee. He was a member of the Massachusetts Medical Society, and also the American Medical Association. J. M. T.

RUFUS WOODWARD, M.D.

Rufus Woodward, M.D., son of Dr. Samuel B. Woodward, who was so distinguished as the first physician of the first State Lunatic Hospital in Massachusetts—the one at Worcester, was born in Weathersfield, Connecticut, Oct. 3, 1819, and died at Worcester, Dec. 30, 1885. He graduated in the classical department at Harvard College in the class of 1841, and received his degree of M.D. in the medical school of the same college in 1845. He served as assistant to his father in the Lunatic Hospital, and to Dr. George Chandler, who was his father's successor for about five years. Resigning this position in 1848, he went to Europe, for further prosecution of study, mostly in Paris, for two years, when he returned to Worcester, and entered upon general practice, which he continued up to the time of his death, visiting patients even to the last day of his life.

Dr. Woodward held the respect and affection of his patients in an unusual degree, and never failed to deserve their affection and respect; and his professional assistants were even his best friends. In his undergraduate course at Cambridge, President Walker took a special interest in him, and wished him to study theology. But Dr. Woodward was very fond of Natural History from the first, and he preferred the study of medicine, which was akin to it. He loved botany especially, as if it were nearer to the Heavenly sunshine.

He was one of the original members of the Worcester Society for Medical Improvement. He was a founder of the Worcester Natural History Society under the counsel of the first Agassiz. A member of the American Antiquarian Society; in one of whose recent publications there is an extended notice of him. He was President of the Board of Health, and very efficient. In all these offices he was faithful, and his merit was recognized, and resolutions of condolence and of respect on his decease were presented to the family, and spread on the records of the various organizations. He was also a member of the American Medical Association since 1880.

Dr. Woodward was generous by instinct and by cultivation. He was always happy, and happier when doing good to others. He had no meanness, no malice, and no jealousies. And in his death every member of the profession in his neighborhood, felt that the loss was of a good friend and a good man. Dr. Woodward was married June 12, 1856, to Jane N. Fox who survives him. They had four children, all of whom are living. The oldest, a son, succeeds to his father's practice. T. S.

BOOK REVIEWS.

THE CURSE OF THE WORLD, NARCOTICS: Why Used; What Effects; the Remedy. With numerous Colored Illustrations. By DANIEL WILKINS, A.M., Superintendent of the Washingtonian Home. Chicago: The Blakely Printing Company. 1887.

This is an octavo volume of 370 pages, published in most excellent style. But the attractive features imparted to the volume by the skill of the publishers, affords only a faint index of the remarkable value of its contents. The author is a man of high moral and intellectual endowments, of perfect candor, who has devoted forty years of his life to the practical work of reclaiming men from intemperance with a patience, intelligence, and success that has rarely been equaled. During the last thirteen years he has been Superintendent of the Washingtonian Home of Chicago, an asylum for the reformation of inebriates, during which he has been brought into intimate personal contact with more than 6,000 inebriates, including almost every variety of intoxication, illustrating every degree of moral, intellectual and physical evil produced by alcoholic liquors and opiates; and has studied the motives, impulses, and needs of each from day to day, with that kindly spirit and earnest interest in their welfare that seldom fails to give him access to their fullest confidence. Consequently the views presented in the book before us are the direct result of long-continued practical study of the subject, with an ample field for observation. The first division of the work discusses, in the most simple and interesting manner, the true influences, motives and impulses that lead to the use of fermented and distilled drinks or opiates; the second illustrates with equal clearness the effects of these agents upon the mental and physical conditions of those who use them, including several neatly executed plates representing actual important pathological conditions; and the third discusses the remedies with a logical directness, fullness of detail, and earnest, loving spirit that will not fail to carry conviction to the mind of every intelligent reader. We wish the book could be carefully read, and re-read, by every young man in our country.

MANUAL OF CLINICAL DIAGNOSIS. By DR. OTTO SEIFERT AND DR. FRIEDRICH MÜLLER. Revised and corrected by Dr. Friedrich Müller. Translated by WM. BUCKINGHAM CANFIELD, A.M., M.D. 8vo, pp. 175, with 60 Illustrations. New York: G. P. Putnam's Sons. 1887. Chicago: W. T. Keener.

This little book is what its name signifies, a manual of *clinical* diagnosis. It is not limited to the narrow field of physical diagnosis, but considers all that pertains to symptomatology. It is without doubt one of the very best books devoted to this subject. We have been led to expect of German writers a very diffuse treatment of this subject, but the book before us creates pleasurable surprise at finding it a model of compactness and detail. This constitutes one of its chief advantages. In reading it we have been constantly more and more pleased with the information and at the way in which it is told us. Some statements we would like to see modified, but they are not of prime practical importance. For instance, of Curschmann's spiral threads in sputa the authors say they "are observed in capillary bronchitis and bronchial asthma." To be sure, they occur oftenest in these diseases, but also frequently in pneumonia and sometimes in phthisis. The sphygmogram is not described with as much fullness as we should like to see. And thus a number of minor defects might be pointed out.

The fact that in Germany it has already passed through three editions is evidence of its popularity.

A MANUAL OF MEDICAL JURISPRUDENCE for the Use of Students at Law and of Medicine. By MARSHALL D. EWELL, M.D., LL.D., Professor of Common Law in Union College of Law, Chicago (Law Department of the Northwestern University). Boston: Little, Brown & Co. 1887.

This is a small-sized octavo volume of 409 pages, published in good style. It includes a brief discussion of most of the topics usually presented in larger works on medical jurisprudence, with so much accuracy and good judgment as to make it an exceedingly convenient manual or text-book for students of both law and medicine. Its value is much increased by numerous references to authorities and illustrative cases. The author is well-known as the writer of several valuable law-books, and as an experienced teacher in the Union College of Law, to which he has added a regular education in medicine, thereby acquiring peculiar qualifications for the production of the volume before us.

COURIER REVIEW CALL BOOK. Arranged by E. M. WILSON, M.D., Ph.D. J. H. Chambers & Co. St. Louis, Chicago, and Atlanta.

THE MEDICAL NEWS VISITING LIST for 1888. Philadelphia: Lea Brothers & Co.

We are reminded of the rapid approach of a new year by the appearance of these well known and useful pocket visiting lists and account books. Besides the blank pages there are in each a considerable number of printed pages, containing useful information that all physicians need and that often for the moment slips one's memory.

THE MEDICAL WORLD VISITING LIST. Being a Daily Record of Practice and Accounts without the use of Signs, and hence need no Transferring; arranged in Removable Tablets. Published by *Medical World*, Philadelphia.

This little book is novel and, we should judge, very convenient because of its small compass. Each page is divided. Each half is assigned to a patient. At the top of the column the name and address are to be entered, and below on each line is the day of the month, and opposite it space to enter character of service and its value. One column will hold all the entries for a month.

SYPHILIS. By JONATHAN HUTCHINSON, F.R.S., LL.D., etc. Sm. 8vo, pp. ix, 532. With 8 chromo-lithographs. Philadelphia: Lea Brothers & Co. Chicago: A. C. McClurg & Co.

This is one of the publishers' "Clinical Manuals for Practitioners and Students of Medicine." We feel that Mr. Hutchinson needs no introduction to the profession in this country, especially when he writes on syphilis. As a clinical exposition of its subject, from the author's standpoint, the book leaves nothing to be desired. The colored plates are well executed.

MISCELLANEOUS.

DEATH OF DR. T. R. VARICK.—Dr. Theodore R. Varick, of Jersey City, died in that city on November 23, aged sixty-one years. He received his degree in medicine from the New York University. He was well known as a skilful surgeon, and was Surgeon-General of New Jersey for seventeen years.

NEW BOOKS RECEIVED.

Miner's New Index Rerum. Pocket Size. Ann Arbor, Mich.: J. A. Miner.

Transactions of the American Surgical Association. Vol. v, edited by J. E. Mears, M.D. Philadelphia: P. Blakiston, Son & Co. 1887.

De l'Electricité Comme agent Therapeutique en Gynecologie par Le Docteur Paul F. Mundé. Tradiut par Le Docteur P. Ménière. Paris: Octave Doin, Editeur. 1888.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM NOVEMBER 26, 1887, TO DECEMBER 2, 1887.

So much of S. O. 235, A. G. O., October 8, 1887, as relieves Lt.-Col. Chas. T. Alexander, Surgeon, from duty at St. Louis, Mo., and directs him to report for duty at Ft. Meade, Dak., is amended so as to take effect January 1, 1888. S. O. 274, A. G. O., November 25, 1887.

Capt. H. P. Birmingham, Asst. Surgeon, the leave of absence granted by orders No. 52, Ft. Myers, Va., November 24, is extended twenty-three days. S. O. 255, Div. Atlantic, November 28, 1887.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THREE WEEKS ENDING DECEMBER 5, 1887.

Surgeon Walter Wyman, granted leave of absence for thirty days. November 29, 1887.

Asst. Surgeon L. L. Williams, granted leave of absence for twenty-one days. November 18, 1887.

Asst. Surgeon J. J. Kinyoun, leave of absence extended seven days. November 29, 1887.

Asst. Surgeon R. M. Woodward, granted leave of absence for seventeen days. December 5, 1887.